EL9VERDADERO

SAMSUNG

LCD-TV

Chassis : U61A

Model : LN26D450G1G
LN26D450G1M
LN32D430G3DXZX
LN32D450G1M

SERVICE Manual

TFT-LCD TV

Front Design : ToC Red Black Stand : Round

LN32D430G3DXZX

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1. Precautions

1-1. Safety Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1-1. Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC power jack before servicing.

1-1-2. Servicing the LCD TV

1. When servicing the LCD TV, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times.
   Check the calibration of this meter periodically.

1-1-3. Fire and Shock Hazard

Before returning the LCD TV to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the LCD TV.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistorcapacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):
   WARNING : Do not use an isolation transformer during this test.
   Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

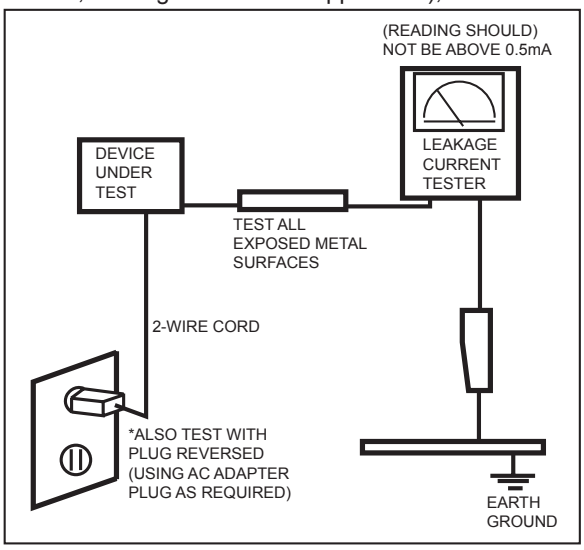

Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts.
   The current measured should not exceed 0.5 milliamp.
   Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safetyrelated characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and / or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2. Servicing Precautions

WARNING: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1. General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
   (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to theblades of the AC plug.
   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3. Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the LCD TV.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (0.4 m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

2. Product specifications

2-1. Model Comparison

Model	Inch		LD450
Front View	All		
Detail View	All		
	All		
Front Color	All		ToC RED Black
Dimensions W x D x H	26"	With Stand	660.7 x 222.1 x 482.8 (mm) / 26 x 8.7 x 19 (inch)
		Without Stand	660.7 x 78.6 x 435 (mm) / 26 x 3.1 x 17.1 (inch)
	32"	With Stand	795.5 x 251.7 x 571.1 (mm) / 31.3 x 9.9 x 22.5 (inch)
		Without Stand	795.5 x 80.4 x 510.3 (mm) / 31.3 x 3.2 x 20.1 (inch)
Weight	26"	With Stand	6.71 (kg) / 14.8 (lbs)
		Without Stand	6.24 (kg) / 13.8 (lbs)
	32"	With Stand	10.85 (kg) / 23.9 (lbs)
		Without Stand	8.6 (kg) / 19 (lbs)
Speaker Output	All		Anti Glear
Antenna	All		None
HDMI	All		384 Mbtye
DLNA	All		Media Play (MOVIE), HDD

2-2. Feature & Specifications

Model	LN26D450G1G (HD)
Feature	
▶ Digital-TV, RF, 2-HDMI, 2-Component, 2-A/V, 1-USB2.0, D-SUB ▶ Brightness: 400 cd/m^2 ▶ High Contrast Ratio : 4,500:1 ▶ Response Time: 8.5 ms	

Specifications		
Item	**Description**	
LCD Panel	26 inch HD 60 Hz	
Scanning Frequency	Horizontal: 60 KHz ~ 73 KHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 M colors	
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5 % positive at 75 Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display Horizontal / Vertical	575.8 (H) x 323.7 (V) (mm) / 22.7 (H) x 12.7 (V) (inch)	
AC power voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	Under 85 W (Under 0.3 W, Stand by)	
Dimensions Set (W x D x H)	With Stand	660.7 x 222.1 x 482.8 (mm) / 26 x 8.7 x 19 (inch)
	Without Stand	660.7 x 78.6 x 435 (mm) / 26 x 3.1 x 17.1 (inch)
Weight	With Stand	6.71 (kg) / 14.8 (lbs)
	Without Stand	6.24 (kg) / 13.8 (lbs)
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ISDB-T, PAL-M / NTSC / PAL-N
	Sound	NTSC-M, Dolby Digital+
Environmental Considerations	Operating Temperature: 32˚F ~ 122˚F (0˚C ~ 50˚C) Operating Humidity: 20 % ~ 90 % Storage temperature: -4˚F ~ 140˚F (-20˚C ~ 60˚C) Storage Humidity: 10 % ~ 90 %	
Audio spec	– MAX Internal Audio Output Power: Each 3 W (Left / Right) – Equalizer: 5 band – Output Frequency: RF: 20 Hz ~ 15.4 KHz AV / Componet / HDMI: 20 Hz ~ 20 KHz	
Note: Dolby Digital$^+$, Game Mode, Film Mode, Energy Saving, Anynet$^+$		

Model	LN26D450G1M (HD)
Feature	
▶ Digital-TV, RF, 2-HDMI, 2-Component, 2-A/V, 1-USB2.0, D-SUB ▶ Brightness: 400 cd/m^2 ▶ High Contrast Ratio: 4,500:1 ▶ Response Time: 8.5 ms	

Specifications		
Item	**Description**	
LCD Panel	26 inch HD 60 Hz	
Scanning Frequency	Horizontal: 60 KHz ~ 73 KHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 M colors	
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5 % positive at 75 Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display Horizontal / Vertical	575.8 (H) x 323.7 (V) (mm) / 22.7 (H) x 12.7 (V) (inch)	
AC power voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	Under 85 W (Under 0.3 W, Stand by)	
Dimensions Set (W x D x H)	With Stand	660.7 x 222.1 x 482.8 (mm) / 26 x 8.7 x 19 (inch)
	Without Stand	660.7 x 78.6 x 435 (mm) / 26 x 3.1 x 17.1 (inch)
Weight	With Stand	6.71 (kg) / 14.8 (lbs)
	Without Stand	6.24 (kg) / 13.8 (lbs)
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	DVB-T, PAL-N, M
	Sound	NTSC-M, Dolby Digital+
Environmental Considerations	Operating Temperature: 32˚F ~ 122˚F (0˚C ~ 50˚C) Operating Humidity: 20 % ~ 90 % Storage temperature: -4˚F ~ 140˚F (-20˚C ~ 60˚C) Storage Humidity: 10 % ~ 90 %	
Audio spec	– MAX Internal Audio Output Power: Each 3 W (Left / Right) – Equalizer: 5 band – Output Frequency: RF: 20 Hz ~ 15.4 KHz AV / Componet / HDMI : 20 Hz ~ 20 KHz	
Note: Dolby Digital$^+$, Game Mode, Film Mode, Energy Saving, Anynet$^+$		

Model	LN32D450G1G (HD)
Feature	
▶ Digital-TV, RF, 2-HDMI, 2-Component, 2-A/V, 1-USB2.0, D-SUB ▶ Brightness: 400 cd/m^2 ▶ High Contrast Ratio: 4,000:1 ▶ Response Time: 8.5 ms	

Specifications		
Item	**Description**	
LCD Panel	32 inch HD 60 Hz	
Scanning Frequency	Horizontal: 60 KHz ~ 73 KHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 M colors	
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5 % positive at 75 Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display Horizontal / Vertical	697.7 (H) x 392.3 (V) (mm) / 27.5 (H) x 15.4 (V) (inch)	
AC power voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	Under 110 W (Under 0.3 W, Stand by)	
Dimensions Set (W x D x H)	With Stand	795.5 x 251.7 x 571.1 (mm) / 31.3 x 9.9 x 22.5 (inch)
	Without Stand	795.5 x 80.4 x 510.3 (mm) / 31.3 x 3.2 x 20.1 (inch)
Weight	With Stand	10.85 (kg) / 23.9 (lbs)
	Without Stand	8.6 (kg) / 19 (lbs)
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ISDB-T, PAL-M / NTSC / PAL-N
	Sound	NTSC-M, Dolby Digital+
Environmental Considerations	Operating Temperature: 32˚F ~ 122˚F (0˚C ~ 50˚C) Operating Humidity: 20 % ~ 90 % Storage temperature: -4˚F ~ 140˚F (-20˚C ~ 60˚C) Storage Humidity: 10 % ~ 90 %	
Audio spec	– MAX Internal Audio Output Power: Each 3 W (Left / Right) – Equalizer: 5 band – Output Frequency: RF: 20 Hz ~ 15.4 KHz AV / Componet / HDMI: 20 Hz ~ 20 KHz	
Note: Dolby Digital$^+$, Game Mode, Film Mode, Energy Saving, Anynet$^+$		

Model	LN32D450G1M (HD)
Feature	
▶ Digital-TV, RF, 2-HDMI, 2-Component, 2-A/V, 1-USB2.0, D-SUB ▶ Brightness: 400 cd/m^2 ▶ High Contrast Ratio: 4,000:1 ▶ Response Time: 8.5 ms	

Specifications		
Item	**Description**	
LCD Panel	32 inch HD 60 Hz	
Scanning Frequency	Horizontal: 60 KHz ~ 73 KHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 M colors	
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels	
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Active Display Horizontal / Vertical	697.7 (H) x 392.3 (V) (mm) / 27.5 (H) x 15.4 (V) (inch)	
AC power voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	Under 110 W (Under 0.3 W, Stand by)	
Dimensions Set (W x D x H)	With Stand	795.5 x 251.7 x 571.1 (mm) / 31.3 x 9.9 x 22.5 (inch)
	Without Stand	795.5 x 80.4 x 510.3 (mm) / 31.3 x 3.2 x 20.1 (inch)
Weight	With Stand	10.85 (kg) / 23.9 (lbs)
	Without Stand	8.6 (kg) / 19 (lbs)
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	DVB-T, PAL-N, M
	Sound	NTSC-M, Dolby Digital+
Environmental Considerations	Operating Temperature: 32˚F ~ 122˚F (0˚C ~ 50˚C) Operating Humidity: 20 % ~ 90 % Storage temperature: -4˚F ~ 140˚F (-20˚C ~ 60˚C) Storage Humidity: 10 % ~ 90 %	
Audio spec.	– MAX Internal Audio Output Power: Each 3 W (Left / Right) – Equalizer: 5 band – Output Frequency: RF: 20 Hz ~ 15.4 KHz AV / Componet / HDMI: 20 Hz ~ 20 KHz	
Note: Dolby Digital$^+$, Game Mode, Film Mode, Energy Saving, Anynet$^+$		

2-3. Specification Comparison to Old Models

Model	LD4G (HD) LN**D450G1G_M			LC4E / LC5F / LC5K LN**C4*0E*M / LN**C530F1M / LN**C550J1M		
Design						
Display Type	LCD TV			LCD TV		
Built-in Tuner	O			O		
Resolution	1366 X 768			1366 X 768		
LCD Panel	TFT LCD Panel 60 Hz			TFT LCD Panel 60 Hz		
Screen Size	26" / 32"			26" / 32" / 37" / 40"		
Picture ratio	16 : 9			16 : 9		
Power Consumption	26"	Under 85 W (Under 0.3 W, Stand by)		26"	Under 90 W (Under 0.3 W, Stand by)	
	32"	Under 110 W (Under 0.3 W, Stand by)		32"	Under 120 W (Under 0.3 W, Stand by)	
Dimensions (W x H x D)	26"	With Stand	26 x 8.7 x 19 (inch)	26"	With Stand	25.5 x 8.8 x 18.7 (inch)
		Without Stand	26 x 3.1 x 17.1 (inch)		Without Stand	25.5 x 3 x 17 (inch)
	32"	With Stand	31.3 x 9.9 x 22.5 (inch)	32"	With Stand	26 x 9.7 x 22.8 (inch)
		Without Stand	31.3 x 3.2 x 20.1 (inch)		Without Stand	25.5 x 3 x 20.2 (inch)
Weight	26"	With Stand	14.8 (lbs)	26"	With Stand	14.7 (lbs)
		Without Stand	13.8 (lbs)		Without Stand	13.8 (lbs)
	32"	With Stand	23.9 (lbs)	32"	With Stand	20.3 (lbs)
		Without Stand	19 (lbs)		Without Stand	19 (lbs)
Brightness	26"	400 (spec)		26"	450 (spec) / 450(marketing) Cd/m^2	
	32"	400 (spec)		32"	450 (spec) / 450(marketing) Cd/m^2	
Contrast Ratio	26"	4,500 (spec)		26"	3,000 (spec) / 4,000:1 (marketing)	
	32"	4,000 (spec)		32"	3,500 (spec) / 6,000:1 (marketing)	
Picture Enhacer	HyperReal Engine (X5)			HyperReal Engine (X4)		
Equalizer	5 Band			5 Band		
Auto Volume Control	O			O		
Surround Sound	Dolby Digital Plus			Dolby Digital Plus / Pulse		
Speaker Output	10 W + 10 W			10 W + 10 W		
PIP	O			O		
Double Window	X			X		
Caption	O			O		
Entertainment Mode	X			X		
Game Mode	O			O		
Energy Saving	O			O		
Anynet+	O			O		
Antena	2 (Cable / Air)			2 (Cable / Air)		

2-4. Detail Factory Option

※ If you replace the main board with new one, please change the factory option as well. The options you must change are “Type”.

Model Name			LN26D450G1G	LN32D450G1G	LN26D450G1M	LN32D450G1M
Panel		Vendor	AML	CMI	AML	AML
		CODE	BN07-00985A	BN07-00951A	BN07-00985A	BN07-00978A
		SPEC	LTF260AP05	CM31B5A	LTF260AP05	LTF320AP11
SMPS		PD Board	BN44-00438A	BN44-00438A	BN44-00438A	BN44-00438B
Byte	**Item**	CHASSIS ASSY	BN91-06406L	BN91-06406P	BN91-06406L	BN91-06406P
0	FACTORY Reset	PBA ASSY CODE	BN94-04486A	BN94-04487A	BN94-04486A	BN94-04487A
1	Type		26A6AH0C	32L6AH0C	26A6AH0C	32A6AH0C
2	Local set		BRA_DTV, COLOMBIA			
3	Model		LD450			
4	Tuner	Auto / SEMCO	SEC_ISDB, SI_TW			
5	Ch Table	-	NONE			
6	Front Color	ON / OFF	T-R-BLK			

2-5. Media Play

2-5-1. Using the Media Play Function

This function enables you to view and listen to photo (JPEG), audio files (MP3) and movie (MPEG) saved on a USB Mass Storage Class (MSC) device.

1. Press the POWER button on the remote control or front panel. The TV is powered on.
2. Connect a USB device containing JPEG and / or MP3 and or/MPEG files to the usb jack (USB jack) on the side of the TV.

- If you enter the Media Play mode with no USB device connected the message “No external storage device found. Check the connection status.” will appear. In this case, insert the USB device, exit the screen by pressing the MEDIA.P button on the remote control and enter the MEDIA.P screen again. MTP (Media Transfer Protocol) is not supported. Certain types of USB Digital camera and Audio devices may not be compatible with this TV. Media Play only supports USB Mass Storage Class devices (MSC). MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives and Flash Card Readers. Please connect directly to The USB port of your TV. If you are using a separate cable connection, there may be a USB Compatibility problem. Before connecting your device to The TV, Please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss. Do not disconnect The USB device while it is loading. MSC supports MP3 and JPEG files, while a PTP device supports JPEG files only. The sequential JPEG format is supported. Photo and Audio files must be named in English, French or Spanish. If not, the files can not be played. Change the file names to English, French or Spanish if necessary. The higher The resolution of The image, The longer it takes to display on the screen.
- The maximum supported JPEG resolution is 15360 x 8640 pixels. For unsupported or corrupted files, The “Not supported File Format” message is displayed. Auto Chaptering function is supported.

※ Auto chaptering: When play movie, push enter key. you can see the snapshot of chapter, and you can skip to the chapter using choice the snapshot.

2-5-2 Supported Formats

■ Supported Subtitle Formats

Name	File extension	Format
MPEG-4 time-based text	.ttxt	text
SAMI	.smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

■ Supported Video Formats

File	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	Divx 3.11 / 4.x / 5.1 / 6.0	1920 x 1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM / DTS Core
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP / MP / HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP / ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	8	
*.asf	ASF	Divx 3.11 / 4.x / 5.1 / 6.0	1920 x 1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM / WMA
		Divx 4.x / 5.1 / 6.0	1920 x 1080	6 ~ 30	8	
		XviD	1920 x 1080	6 ~ 30	8	
		MPEG4 SP / ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	25	
*.wmv	ASF	Window Media Video v9	1920 x 1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP / MP / HP	1920 x 1080	6 ~ 30	25	MP3 / ADPCM / AAC
		MPEG4 SP / ASP	1920 x 1080	6 ~ 30	8	
		XVID	1920 x 1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP/MP / HP	1920 x 1080	6 ~ 30	25	ADPCM / AAC
		MPEG4 SP / ASP	1920 x 1080	6 ~ 30	8	
*.vro	VRO VOB	MPEG2	1920 x 1080	24 / 25 / 30	30	AC3 / MPEG / LPCM
		MPEG1	1920 x 1080	24 / 25 / 30	30	
*.mpg *.mpeg	PS	MPEG1	1920 x 1080	24 / 25 / 30	30	AC3 / MPEG / LPCM /AAC
		MPEG2	1920 x 1080	24 / 25 / 30	30	
*.ts *.tp *.trp	TS	MPEG2	1920 x 1080	24 / 25 / 30	30	AC3 / AAC / MP3 / DD+ / HE-AAC
		H.264	1920 x 1080	6 ~ 30	25	
		VC1	1920 x 1080	6 ~ 30	25	
*.rmvb	RMVB	RV 3.0 / RV4.0	1920 x 1080	30	10	RealAudio 6.9.10

■ Other Restrictions

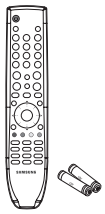
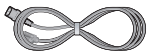
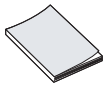
※ **NOTE**

- If there are problems with the contents of a codec, the codec will not be supported.
- If the information for a Container is incorrect and the file is in error, the Container will not be able to play xcorrectly.
- Sound or video may not work if the contents have a standard Bitrate / Frame rate above the compatible Frame / Sec xlisted in the table above.

Video Decoder	Audio codec

- Supports up to H.264, Level 4.1
- H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.
- XVID, MPEG4 SP, ASP:
  - Below 1280 x 720: 60 frame max
  - Above 1280 x 720: 30 frame max
- H.263 is not supported.
- GMC 2 is not support.
- Only Samsung Techwin MJEPG is supported.
	- Supports up to WMA 7, 8, 9, STD.
	- WMA 9 PRO does not support 2 channel excess multi channel or lossless audio.
	- WMA sampling rate 22050 Hz mono is not supported.

2-6. Accessories

Product	Description	Code. No	Remark
	Remote Control	AA59-00486A	Samsung Electronics Service center
	Power Cord	3903-000601	
	Owner’s Instructions	BN68-03375A	
	Warranty Card / Safety Guide Manual (Not available in all locations)	AA68-03242L AA68-03533A	

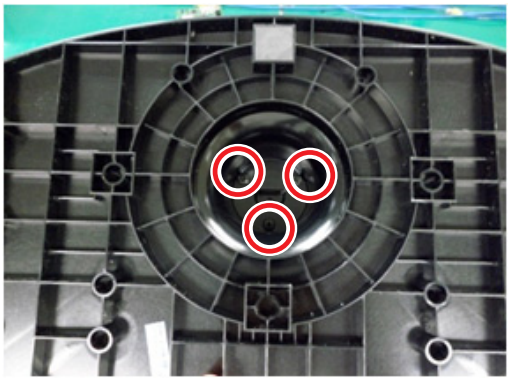
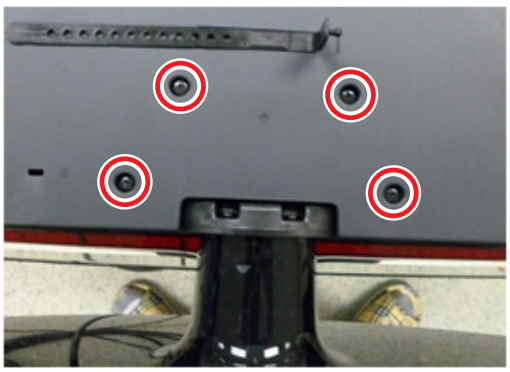
3. Disassembly and Reassembly

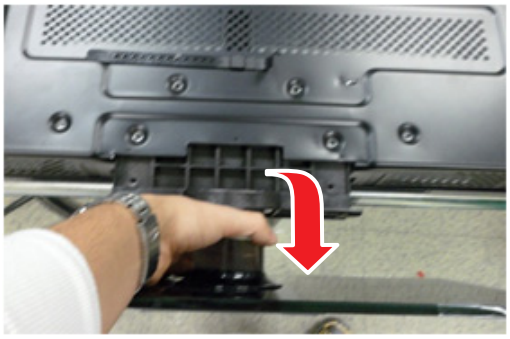
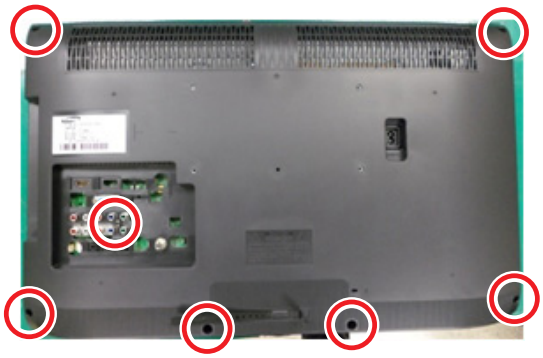
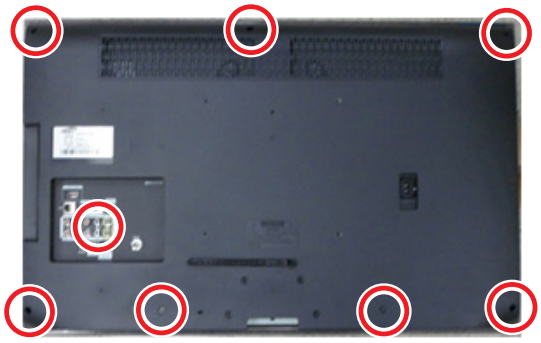
This section of the service manual describes the disassembly and reassembly procedures for the LCD TV.

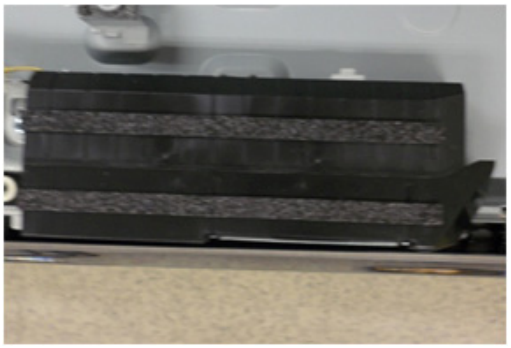
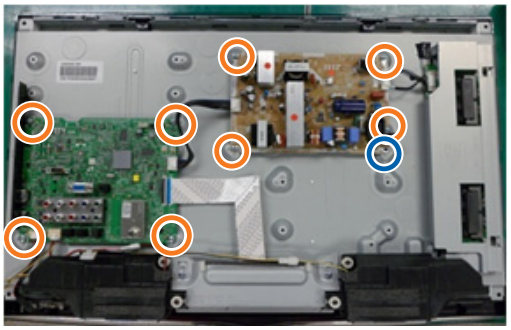
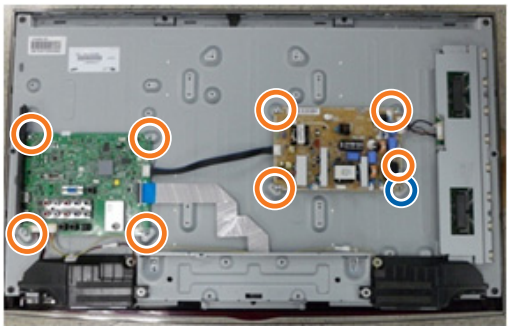
⚠ **WARNING:** This LCD TV contains electrostatically sensitive devices. Use caution when handling these components.

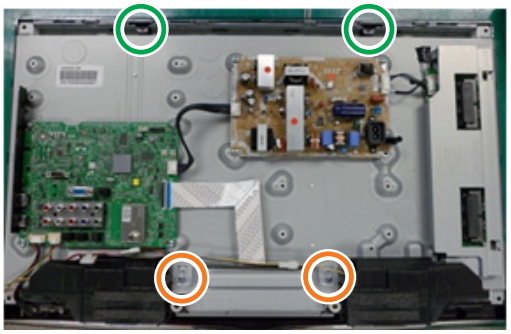
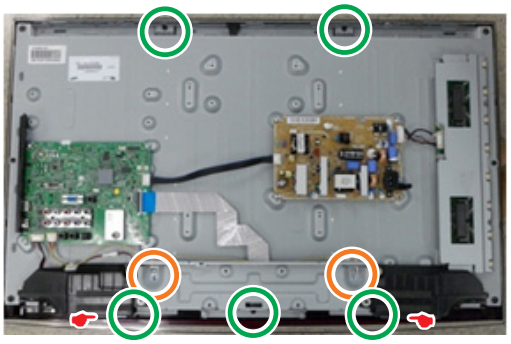
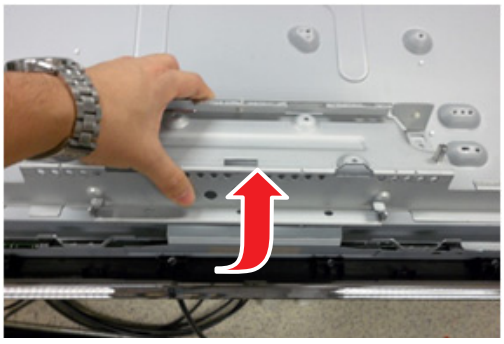
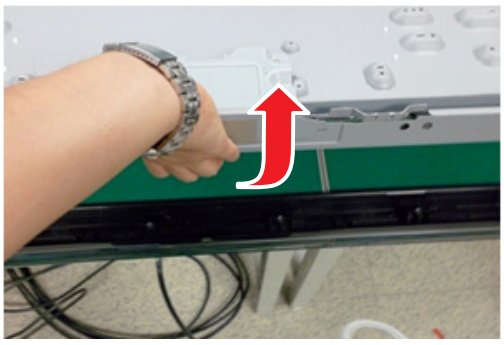
3-1. Disassembly and Reassembly

⚠ **Cautions:** 1. Disconnect the LCD TV from the power source before disassembly.
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.

Description	Inch	Picture Description	Screws
1. Place monitor face down on cushioned table.			
2. Remove the screws from the stand. 26": 3 EA 32": 4 EA	26"		 6002-001294
	32"		

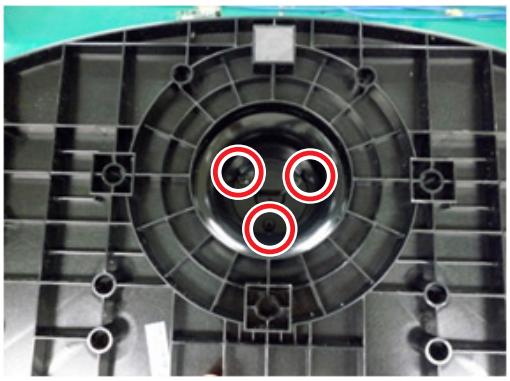
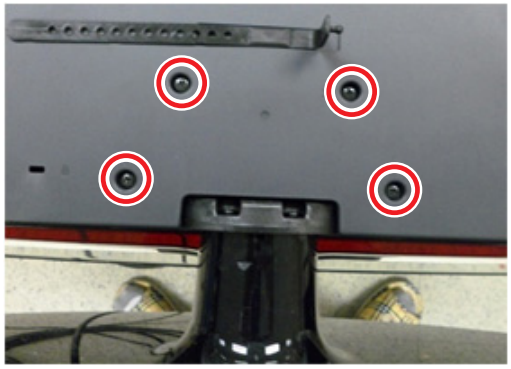
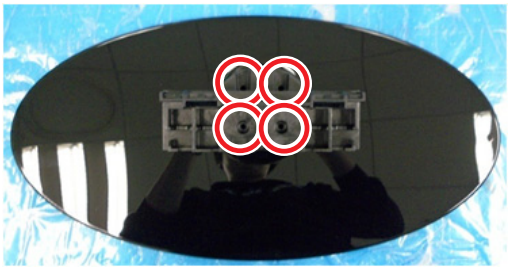
Description	Inch	Picture Description	Screws
3. Remove stand.	26"		
	32"		
4. Remove the screws of rear-cover. 26": 7 EA 32": 8 EA	26"		 6002-001294
	32"		

Description	Inch	Picture Description	Screws
5. Lift up the rear-cover.			
6. Remove the left and right speaker.			
7. Remove the screws of main board. 26", 32": 4 EA Remove the screws of IP board. 26", 32": 5 EA	26"		 6001-002284 6003-001439
	32"		

Description	Inch	Picture Description	Screws
8. Remove the screws of stand link. 26": 2 EA 32": 5 EA Remove the screws of panel and front. 26" / 32": 2 EA. ☛ screw is hidden under speaker	26"		 6001-002284 6003-001003
	32"		
9. Lift up the stand link.			
10. Lift up the panel.			

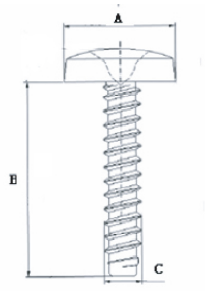
※ Reassembly procedures are in the reverse order of disassembly procedures.

3-2. Stand Assembly

Rear cover screws	Stand Guide screws
-	
	

Inch	Rear cover screws		Stand Guide screws	
26"	-	-	6002-001294	3 EA
32"	6002-001294	4 EA	6002-001294	4 EA

Screw Size

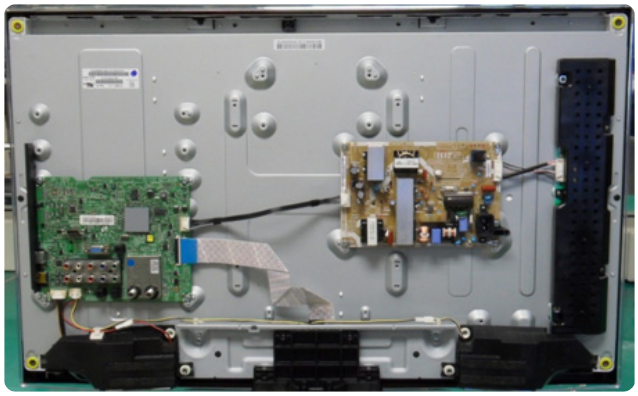
Code No.	A (mm)	B (mm)	C (mm)	Q'ty	
6002-001294	7.80 ~ 8.30	15.2 ~ 16.0	3.45 ~ 3.85	26": 10 EA 32": 12 EA	
6001-002284	8.3 ± 0.5	8.0 ± 0.6	3.83 ~ 3.98	26", 32": 10 EA	
6003-001439	8.3 ± 0.4	8.0 ± 0.4	3.85 ~ 3.93	26", 32": 1 EA	
6003-001003	7.80 ~ 8.30	15.2 ~ 16.0	3.45 ~ 3.85	26": 2 EA 32": 5 EA	

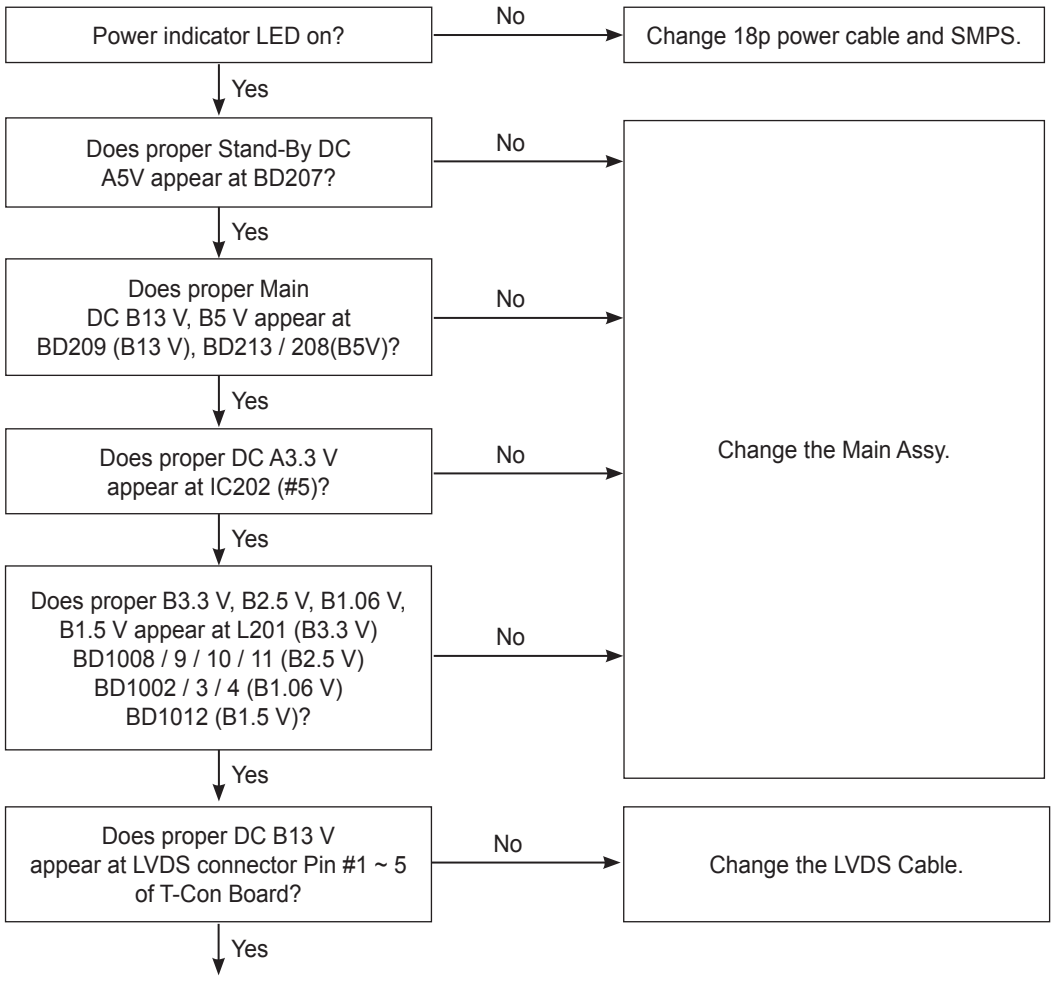
4. Troubleshooting

4-1. Troubleshooting

1. Check the various cable connections first.
   - Check to see if there is a burnt or damaged cable.
   - Check to see if there is a disconnected or loose cable connection.
   - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.

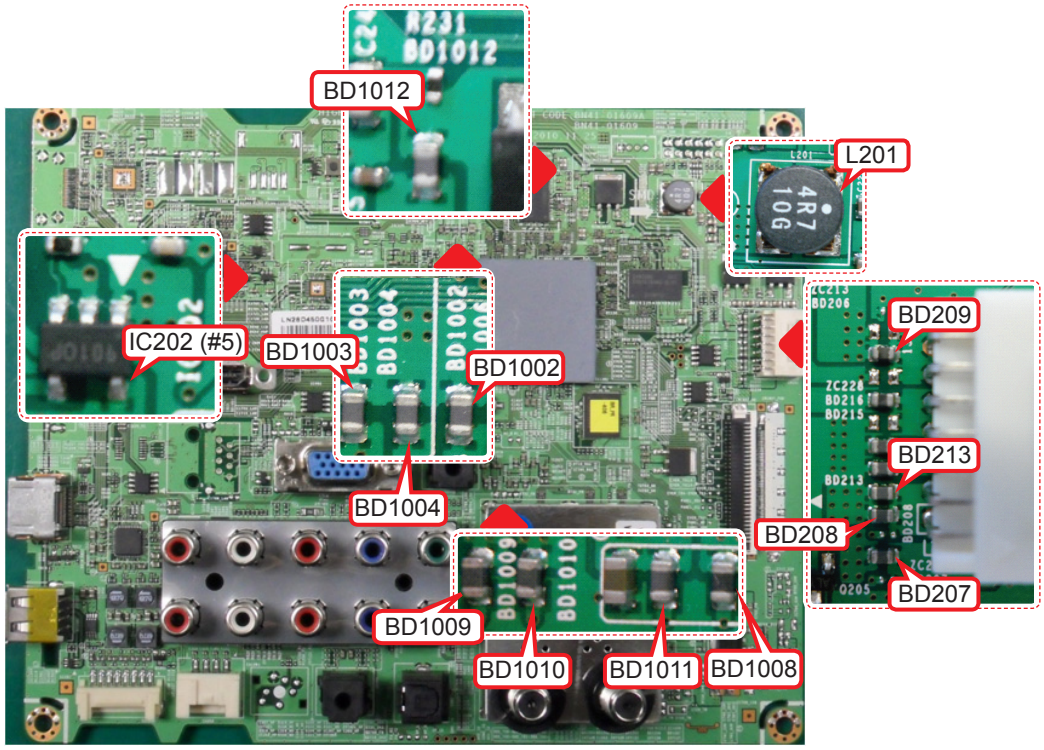
4-1-2. No Power

Symptom	– The LEDs on the front panel do not work when connecting the power cord. – The SMPS relay does not work when connecting the power cord. – The units appears to be dead.
Major checkpoints	The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following: – Check the internal cable connection status inside the unit. – Check the fuses of each part. – Check the output voltage of SMPS. – Replace the Main Board.
Diagnostics	

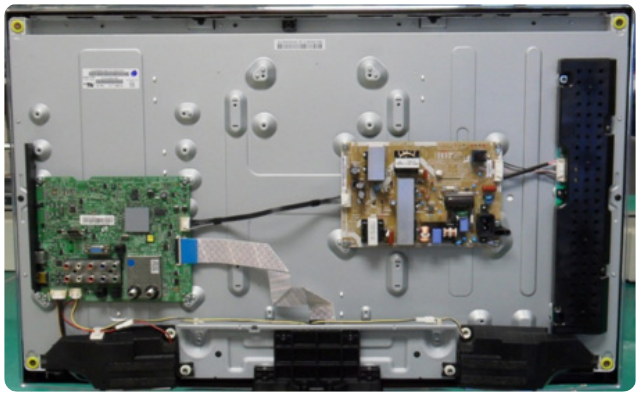

Power indicator LED on?
No
Change 18p power cable and SMPS.
Yes
Does proper Stand-By DC A5V appear at BD207?
No
Yes
Does proper Main DC B13 V, B5 V appear at BD209 (B13 V), BD213 / 208(B5V)?
No
Yes
Does proper DC A3.3 V appear at IC202 (#5)?
No
Yes
Does proper B3.3 V, B2.5 V, B1.06 V, B1.5 V appear at L201 (B3.3 V) BD1008 / 9 / 10 / 11 (B2.5 V) BD1002 / 3 / 4 (B1.06 V) BD1012 (B1.5 V)?
No
Change the Main Assy.
Yes
Does proper DC B13 V appear at LVDS connector Pin #1 ~ 5 of T-Con Board?
No
Change the LVDS Cable.
Yes

Diagnostics	A power is supplied to set? → No → Check a other function (No picture part). Replace a LCD Panel.
Caution	Make sure to disconnect the power before working on the IP board.

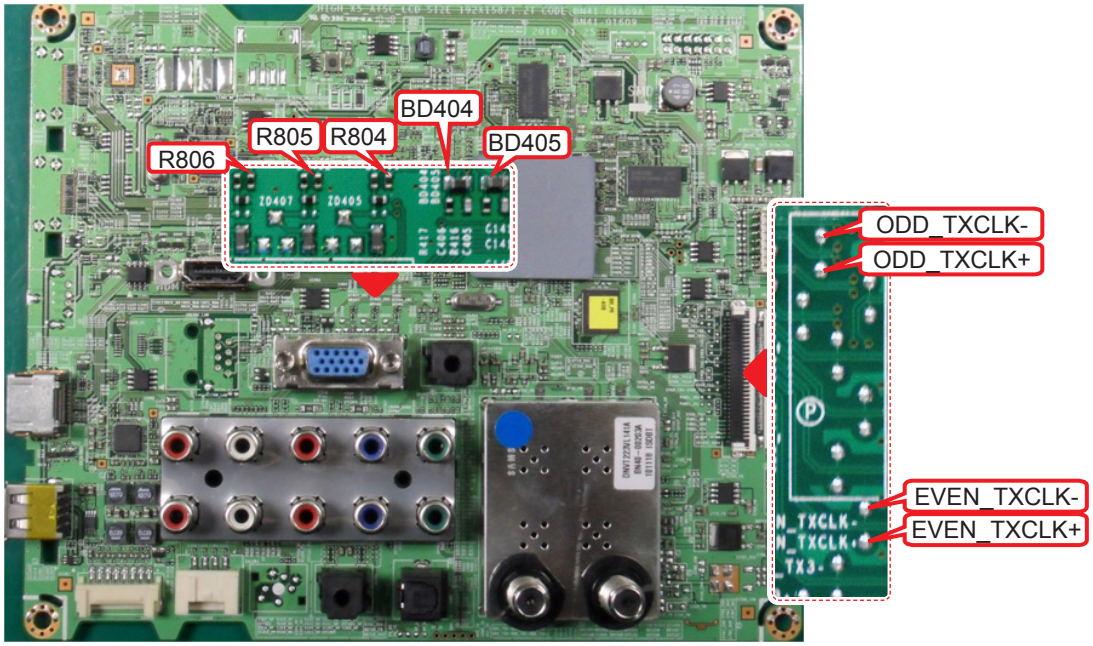
Location (Main) - TOP



4-1-3. No Video_Analog PC signal

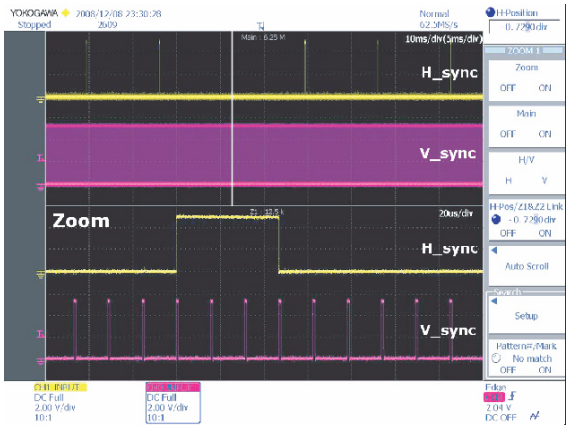
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the PC source. – Check the Arsenal, Check the Chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

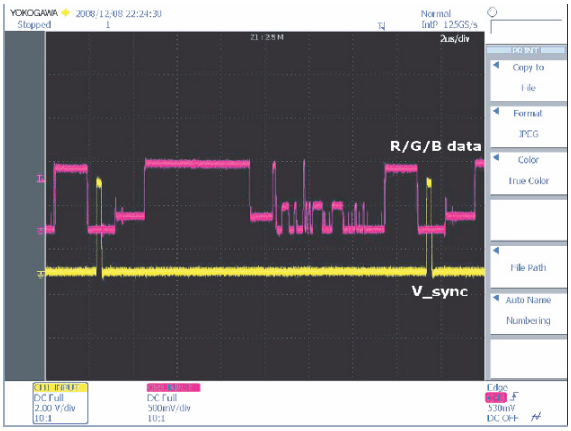
Location (Main) - TOP



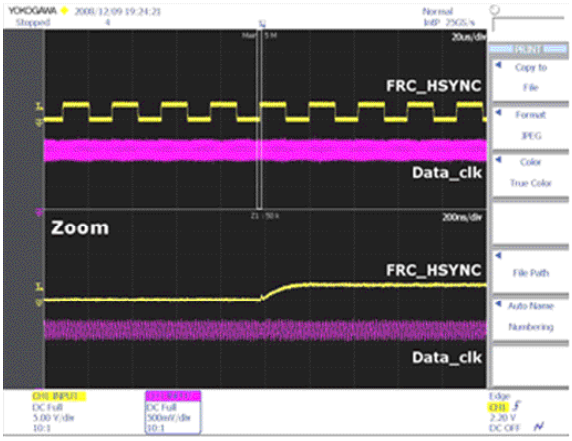
■ WAVEFORMS

❶	**PC input (V-sink, H-sink, R / G / B)**

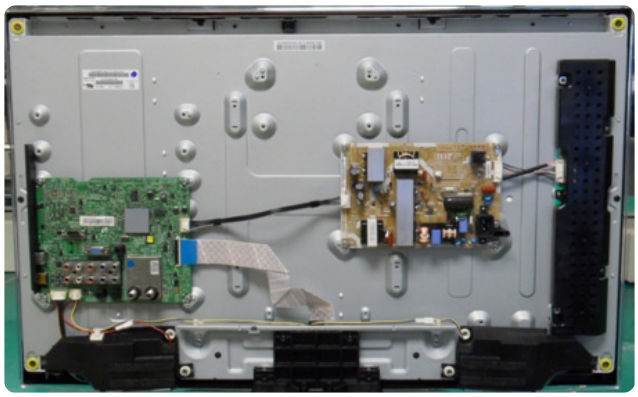




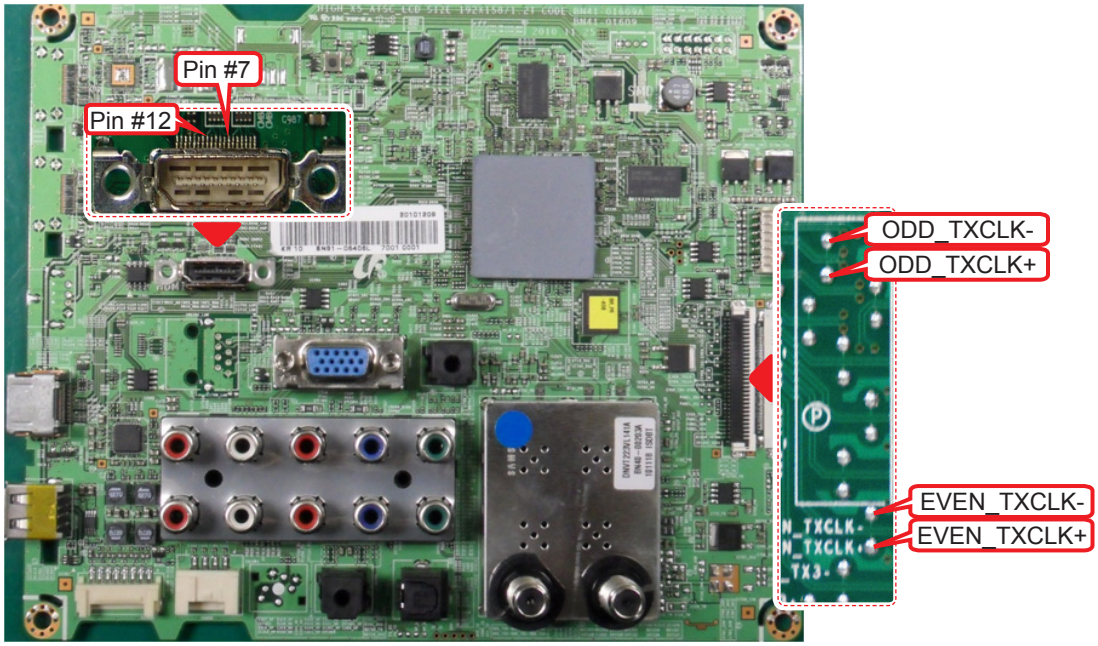
❷	**LVDS output**



4-1-4. No video_HDMI1, 2 - Digital signal

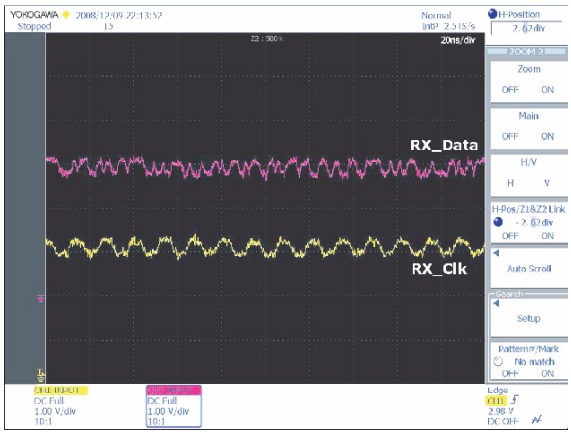
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the HDMI source. – Check the HDMI switch, Check the Chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

Location (Main) - TOP

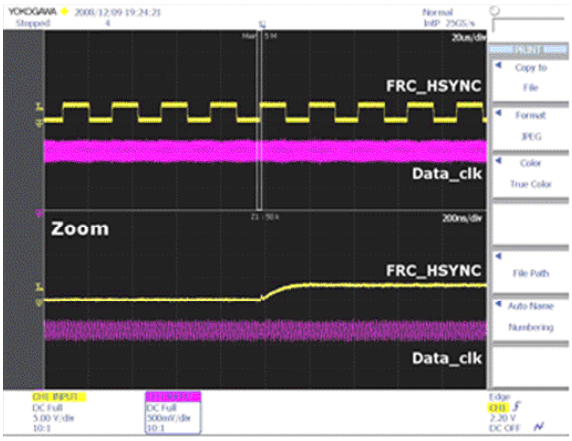


■ WAVEFORMS

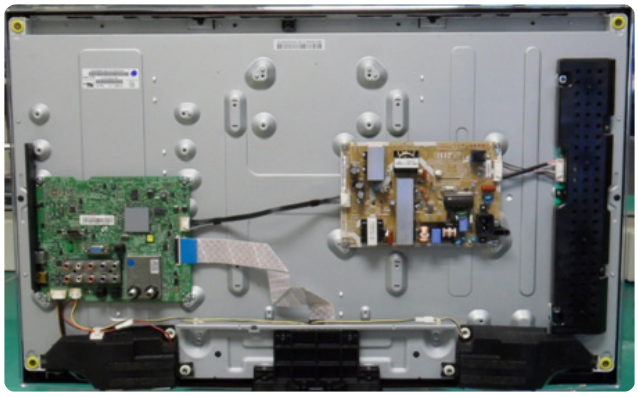
❸	**HDMI input (RX_Data, RX_Clk)**



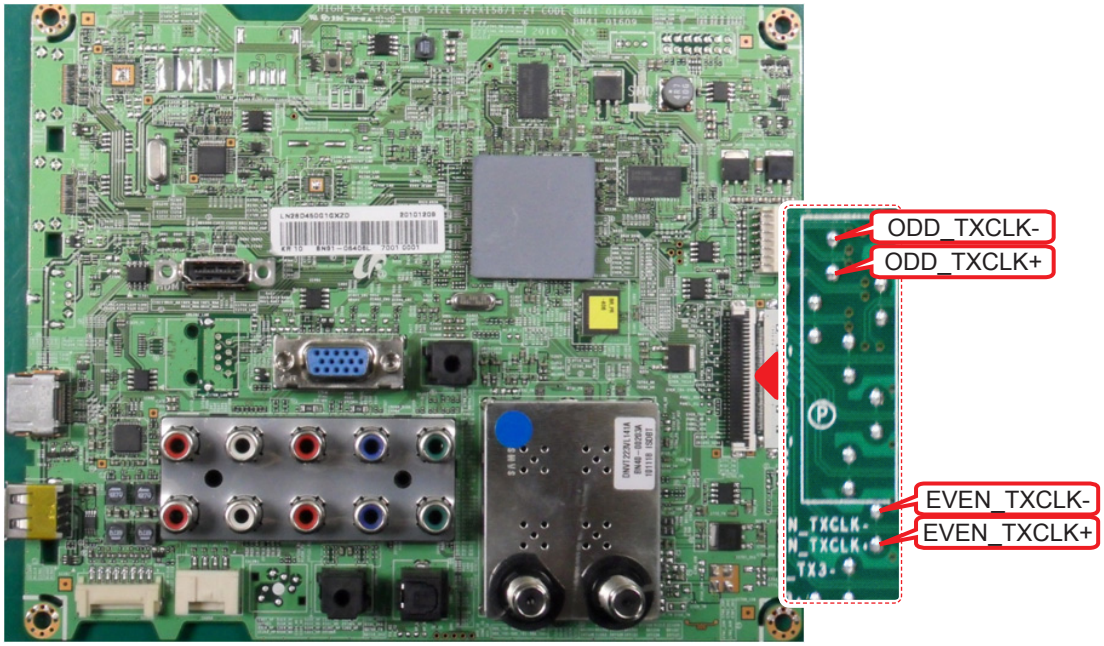
❷	**LVDS output**



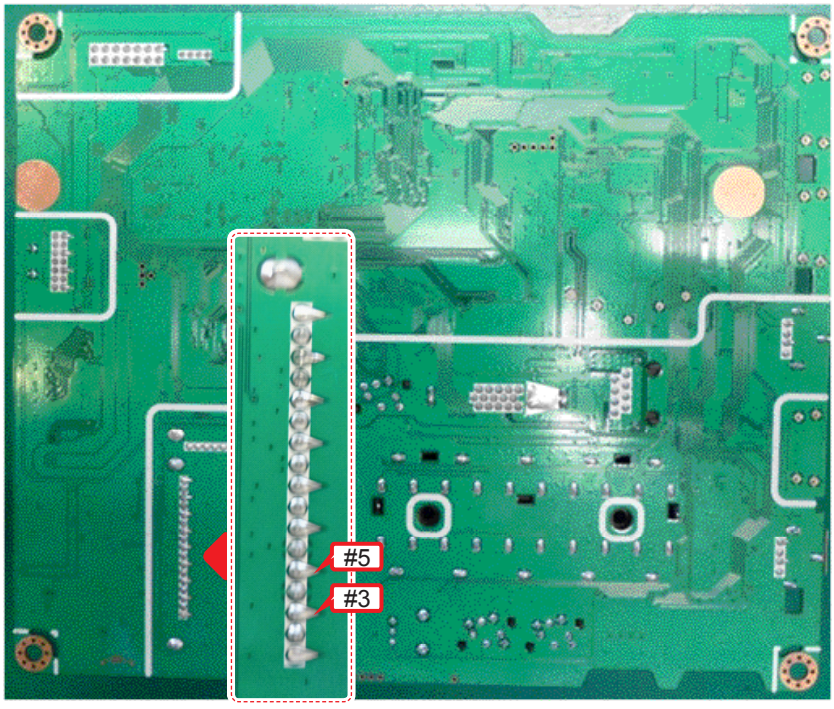
4-1-5. No Video_Tuner - CVBS

Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the Tuner CVBS source. – Check the Tuner, Check the Chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

Location (Main) - TOP

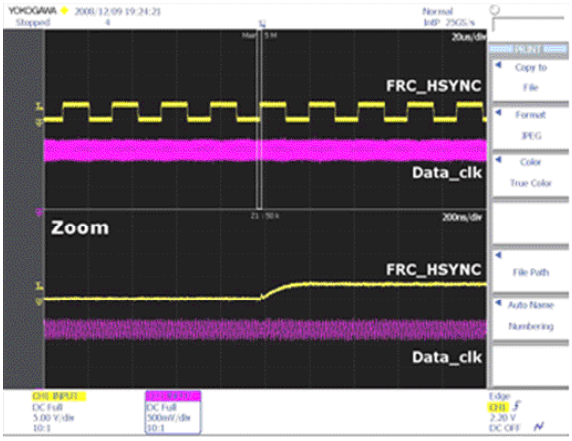


Location (Main) - BOTTOM

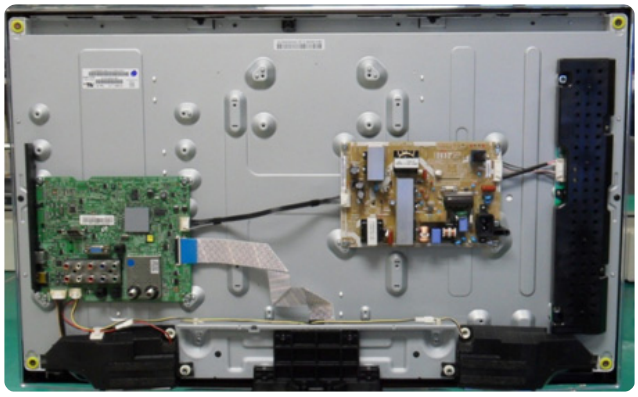


■ WAVEFORMS

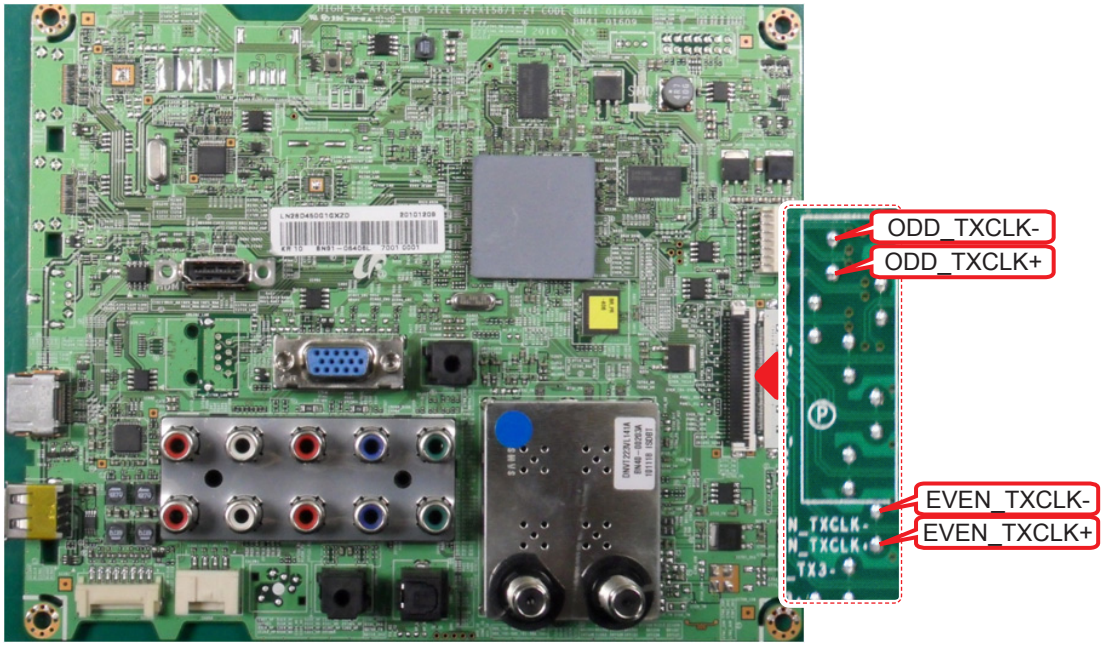
❷	LVDS output



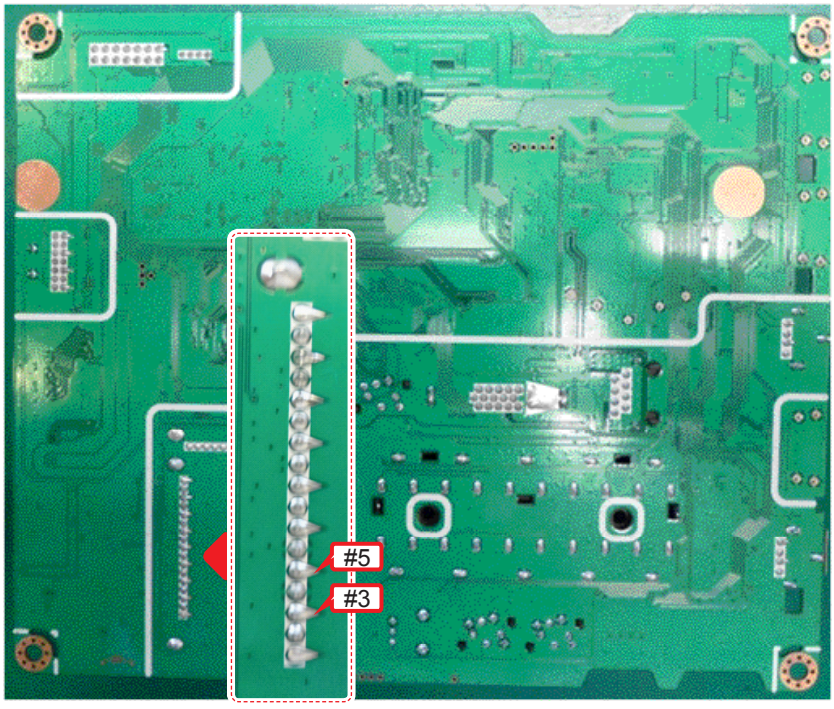
4-1-6. No Video_Tuner DTV

Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the DTV source. – Check the Tuner, Check the Chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

Location (Main) - TOP

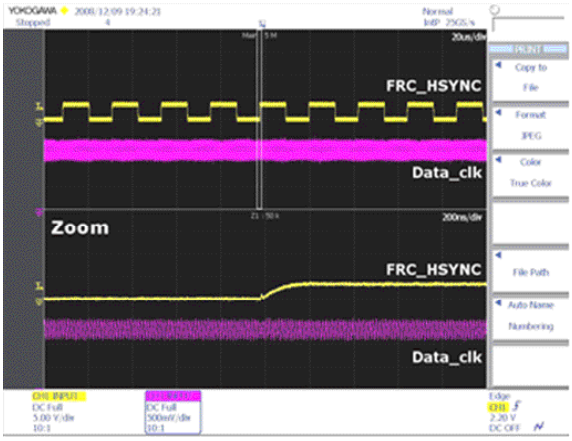


Location (Main) - BOTTOM

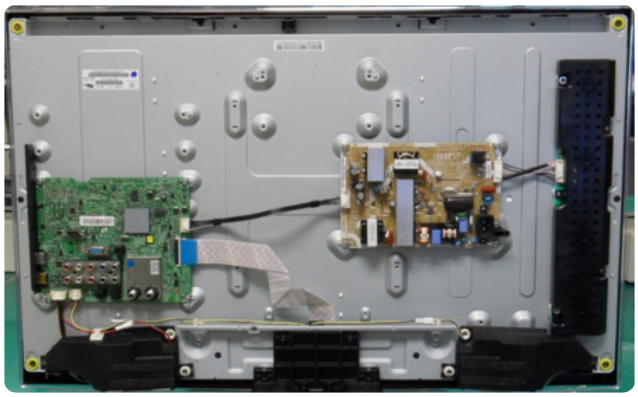


■ WAVEFORMS

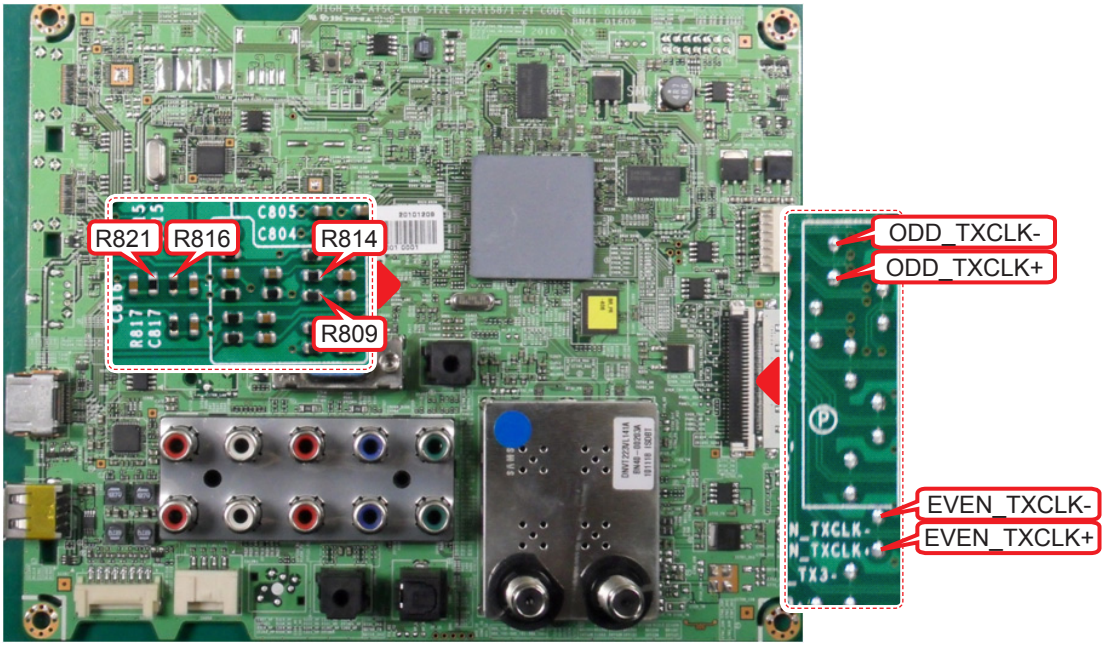
❷	LVDS output



4-1-7. No Video_Video CVBS

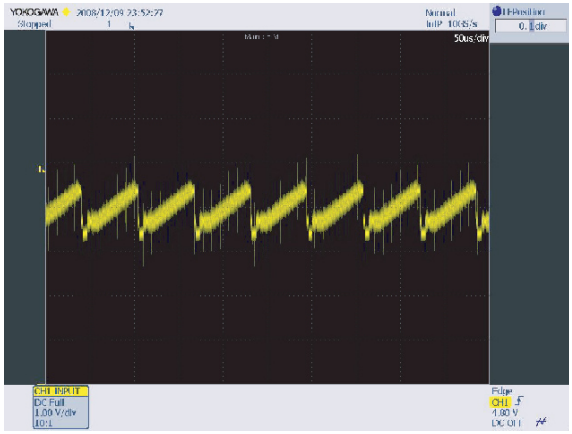
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the Video CVBS source. – Check the Chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

Location (Main) - TOP

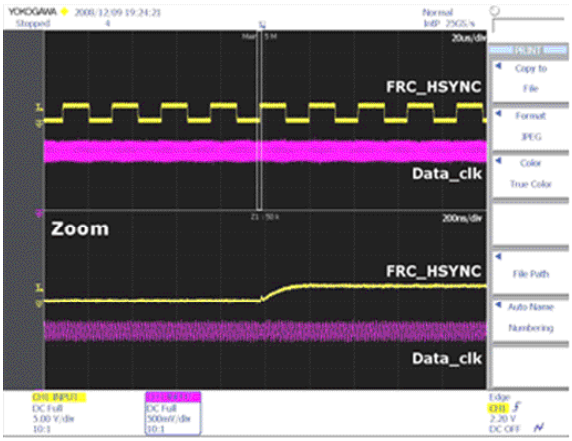


■ WAVEFORMS

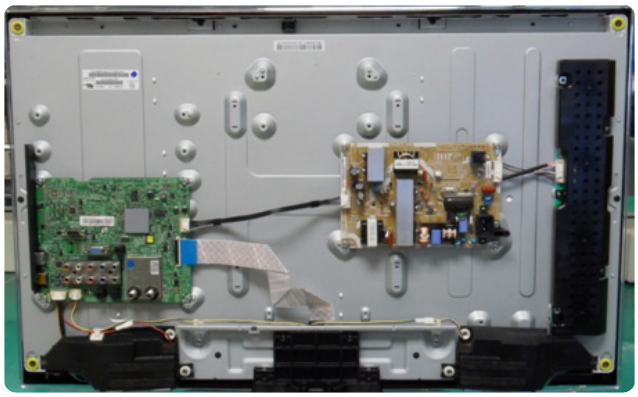
❹	**CVBS OUT (Grey Bar)**



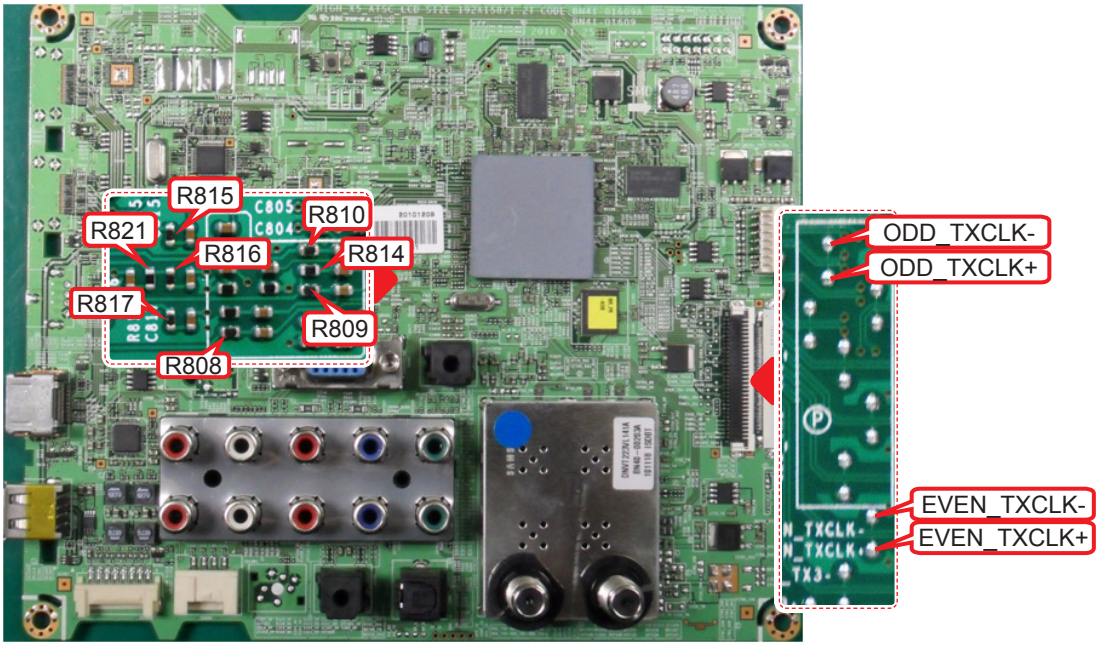
❷	**LVDS output**



4-1-8. No Video_Component

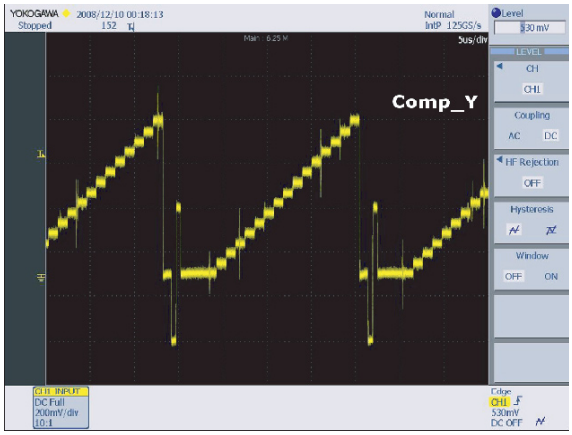
Symptom	– Audio is normal but no picture is displayed on the screen.
Major checkpoints	– Check the Component source. – Check the chelsea. – This may happen when the LVDS Cable connecting the Main Board and the Panel is disconnected.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

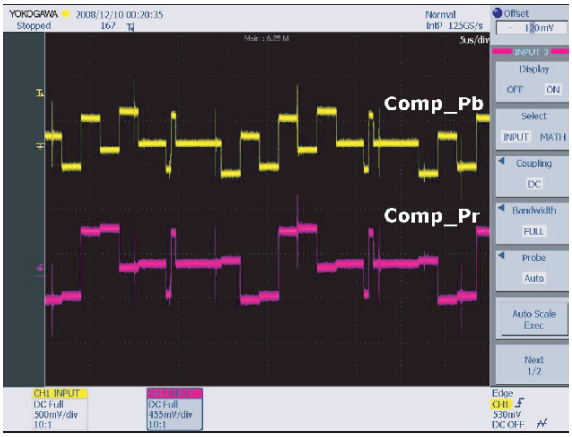
Location (Main) - TOP



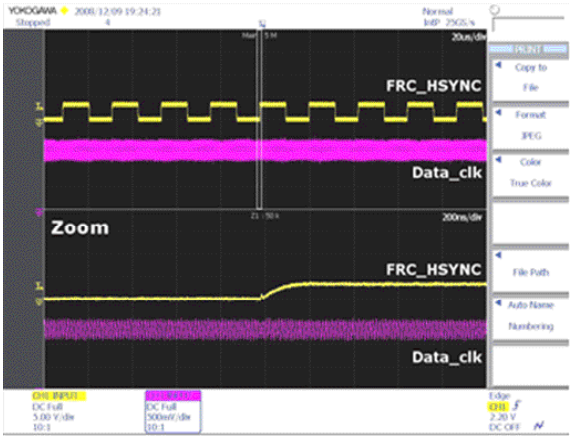
■ WAVEFORMS

❺	**Compnent_Y (Gray scale) / Pb / Pr (Color bar)**

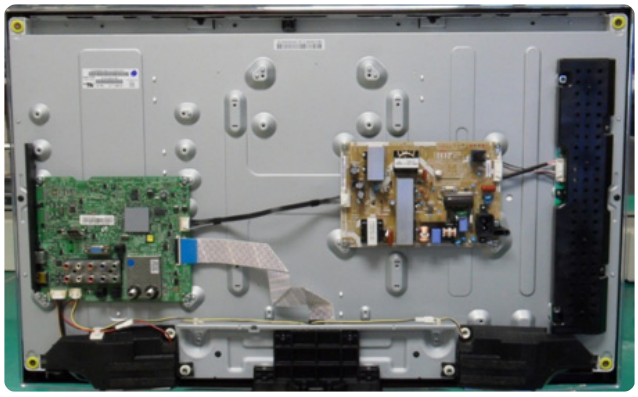




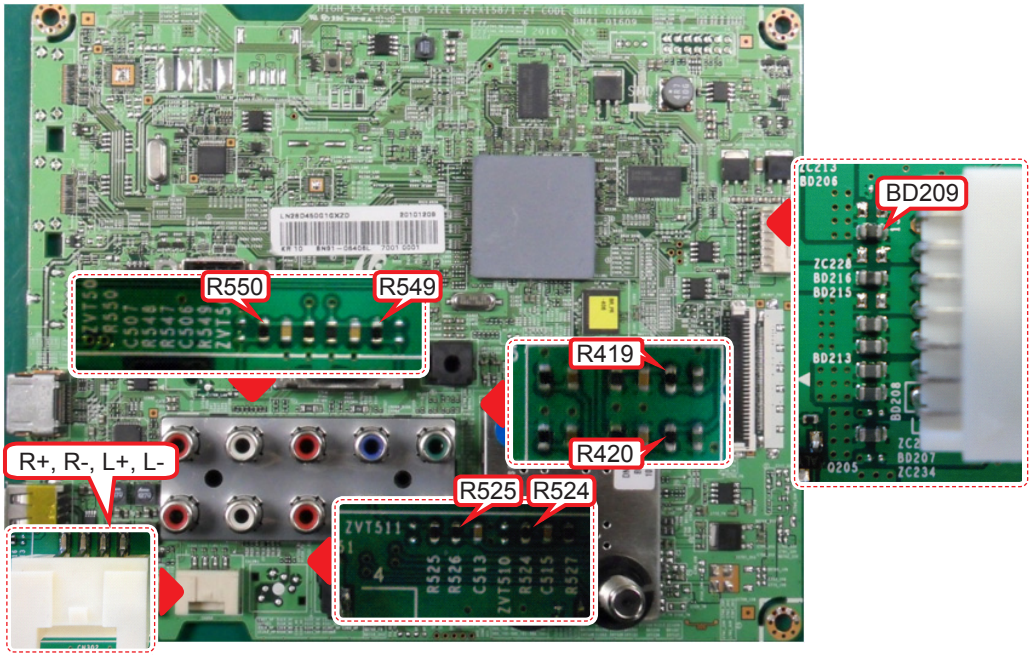
❷	**LVDS output**



4-1-9. No Sound

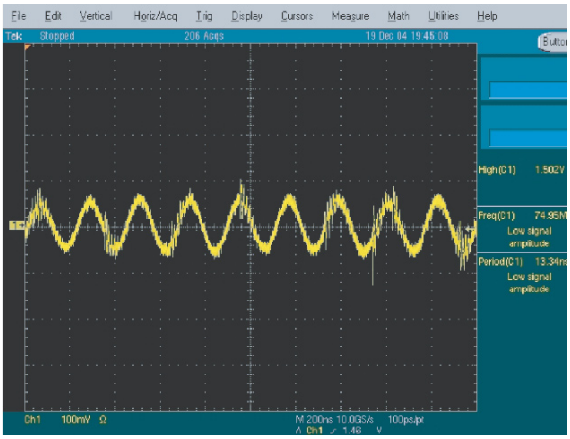
Symptom	– Video is normal but there is no sound.
Major checkpoints	– When the speaker connectors are disconnected or damaged. – When the sound processing part of the Main Board is not functioning. – Speaker defect.
Diagnostics	
Caution	Make sure to disconnect the power before working on the IP board.

Location (Main) - TOP



■ WAVEFORMS

❼	**Speaker out**



4-2. Function

Control the sensitivity of function key is available in Factory mode.

Option		
Control	Sub Option	Key Sensitivity
SVC		Function Key
Expert		
ADC / WB		
Advanced		

Key Sensitivity
Default: 33
- 1 ~ 254 and Not Used
- Raising this value, the sensitivity decreases
- Not Used: Not use sensitivity, use Function Default value

Function Key
Default: Unlock
- Set the value to ‘Lock’, Lock the Function key.

4-3. Factory Mode Adjustments

4-3-1. Entering Factory Mode

- If you do not have Factory remote- control

Power OFF → MUTE → 1 → 8 → 2 → Power ON

- If you have Factory remote-control

INFO → Factory

If you don't have Factory remote control, can't access the factory mode.

Option	**T - MST4IBRC - XXX** **T - MST4IBRS - XXX** **EDID SUCCESS** **HDCP: SUCCESS** **CALIB: AV / COM / PC / HDMI /** **Option: XXXX XXXX XXXX X** **SDAL - XXX** **RFS: "Mstar - X5 00XX"** **KERNERL MODULE VERSION: "XXXXX_XX"** **20XX - XX - XX** **TYPE: XXXXXX** **MAC Not Available** **FACTORY DATA VER: XXX** **EERC VERSION: XXX** **DTP - AP - COMP - 310 - 01** **DTP - HIIG - 0304** **DTP - BP - 0314** **DATE OF PURCHASE: XX / XX / XXX**
Control	
SVC	
Expert	
ADC / WB	

4-3-2. Factory Data

■ LD450

Option			
Factory Menu Name	***Data***	***Range***	***Remark***
Factory Reset	-		
Type	26A6AH0C	NONE / 19A6TH0C / 19I6TH0C / 22D6AF0C / 22I6AF0C / 26A6AH0C / 6D6AH0C / 32A6AF0C / 32A6AH0C / 32D6AF0C / 32L6AH0C / 37L6AF0C / 40A6AF0C / 40L6AF0C / 46A6AF0C / 46D6AF0C / 19A6AH0E / 19P6AH0E / 22D6UF0E / 22P6UF0E / 23A6UF0E / 24P6UF0E / 27A6UF0E / 32A6AH0E / 32A6UF0E / 32D6AH0E / 32D6UF0E / 40A6UF0E / 40H6UF0E / 46A6UF0E / 46D6UF0E / 46DHHcD / 51DFHcD / 51DHHcD / 51DSArD / 51DSCrD / 59DFHcD / 59DSArD	
	32L6AH0C		
Local Set	BRA_DTV	NONE / BRA_DTV / CHILE_DTV / PERU_DTV / ARG_DTV / ARG_ATV	
Model	LD450	LD400 / LD450 / LD480 / LD550 / LD570 / LD580 / UD4000 / UD4010 / UD5000 / UD5500 / UD5550 / PD450 / PD451 / PD460 / PD490 / PD491PD540 / PD541 / PD550 / PD551 / PD570 / PD6400 / PD6500 / PD6900 / PD7000	
TUNER	SEC_ISDB	SEC_ATSC / SEC_TC / ALPS_TC / SI_TCS / SI_T2 / SEC_ISDB / SEC_ATV / SI_ATC /	
Ch Table	NONE	NONE / SUWON / SAMEX	
Front Color	NONE	NONE / S-C-BLK / S-R-BLK / S-BLK / T-R-BLK / T-C-BLK	

Control			
Factory Menu Name	***Data***	***Range***	***Remark***
EDID			
EDID ON / OFF	Off	On / Off	
EDID WRITE ALL		Success / Failure	
EDID WRITE PC		Success / Failure	
EDID WRITE HDMI1		Success / Failure	
EDID WRITE HDMI2		Success / Failure	
EDID WRITE HDMI3		Success / Failure	
EDID WRITE HDMI4		Success / Failure	
EDID 1.2 PORT		NONE / Not Support / HDMI2 / HDMI3 / HDMI4	
EDID WRITE DVI			
Sub Option			
RF Mute Time	600ms	0ms ~ 1000ms	
RS-232 Jack	UART	Debug / Login / UART	

Watchdog	ON	ON / OFF	
WD Count	0	0 ~ 255	
Dimm Type	EXT	fixed	
Lvds Format	JEIDA	JEIDA / VESA / 19INCH	
Language_Arbic	US	KR / US / EU	Info+fatory
TOOLS Support	32	0 ~ 255	Info+fatory
LNA Support	0	0 ~ 255	Info+fatory
MediaPlay DB	On whth 5MB	fixed	Info+fatory
MediaPlay Movie	chapterinMedia	fixed	Info+fatory
MediaPlay DLNA	OFF	fixed	Info+fatory
MediaPlay PlayList	OFF	fixed	Info+fatory
NETWORK Support	EXT_WIFI	Not Support / Cable / EXT_WIFI	Info+fatory
Info Link Server Type	development	operationg / development / developing	Info+fatory
Info Link Country	USA	None / USA	Info+fatory
TTX List	…	fixed	Info+fatory
TTX Group	…	fixed	Info+fatory
24Px4 Support	OFF	ON / OFF	Info+fatory
Power Indicator Support	OFF	ON / OFF	Info+fatory
BD Wise Support	OFF	ON / OFF	Info+fatory
Data Service Support	OFF	ON / OFF	Info+fatory
Alternate Del	OFF	ON / OFF	Info+fatory
OTN Server Type	operationg	operation / development	
OTN Test Server	OFF	OFF / A / B / C / D / E Zone	
OTN Support	ON	ON / OFF	
OTN Reset			
OTN Duration	OFF	ON / OFF	
OTN Fail Test	OFF	ON / OFF	
IIC Bus Stop	OFF	ON / OFF	Info+fatory
Visual Test	Disable	fixed	Info+fatory
Emergency Log Copy			Info+fatory
Checksum	0x0000		Info+fatory
View Log			
Select Log Type	*IR Key*	*NVRAM / DIAGNOSIS / IR KEY*	
Log View			
Delete Log			
ColorSpace Support	RGB Type	RGB Type / HueSate Type	Info+fatory
Gemstar On / Off	OFF	ON / OFF	Info+fatory
WSS Support	OFF	ON / OFF	Info+fatory
PVR Support	OFF	ON / OFF	Info+fatory
CI Support	OFF	ON / OFF	Info+fatory
Eeprom Reset			Info+fatory

EER Reset			Info+fatory
NVR All Clear	*OFF*		Info+fatory
Spread Spectrum			
LVDS Spread	*ON*	*ON / OFF*	*Info+fatory*
Period	*40K*	*30K / 40K / 50K / 60K*	*Info+fatory*
Amplitude	*1.5*	*0.0 / 0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0*	*Info+fatory*
DDR Spread	*1%*	*0.1 ~ 2.0%*	*Info+fatory*
DDR Margin			Info+fatory
A CTRL_OFFSET_0_3	*0X0*		*Info+fatory*
A CTRL_OFFSET_D	*0X0*		*Info+fatory*
B CTRL_OFFSET_0_3	*0X0*		*Info+fatory*
B CTRL_OFFSET_D	*0X0*		*Info+fatory*
H.264 Margin	8	0 ~ 2000	
MPEG Margin	1000	0 ~ 2001	
Tuner Margin	10	0 ~ 2002	
SST			Info+fatory
Y0 Ref	*166*	*0 ~ 255*	*Info+fatory*
Y1 Ref	*148*	*0 ~ 255*	*Info+fatory*
Y2 Ref	*119*	*0 ~ 255*	*Info+fatory*
Y3 Ref	*101*	*0 ~ 255*	*Info+fatory*
Y4 Ref	*76*	*0 ~ 255*	*Info+fatory*
Y5 Ref	*60*	*0 ~ 255*	*Info+fatory*
Y6 Ref	*31*	*0 ~ 255*	*Info+fatory*
Y7 Ref	*0*	*0 ~ 255*	*Info+fatory*
Cb0 Ref	*128*	*0 ~ 255*	*Info+fatory*
Cb1 Ref	*64*	*0 ~ 255*	*Info+fatory*
Cb2 Ref	*148*	*0 ~ 255*	*Info+fatory*
Cb3 Ref	*85*	*0 ~ 255*	*Info+fatory*
Cb4 Ref	*171*	*0 ~ 255*	*Info+fatory*
Cb5 Ref	*108*	*0 ~ 255*	*Info+fatory*
Cb6 Ref	*194*	*0 ~ 255*	*Info+fatory*
Cb7 Ref	*0*	*0 ~ 255*	*Info+fatory*
Cr0 Ref	*128*	*0 ~ 255*	*Info+fatory*
Cr1 Ref	*137*	*0 ~ 255*	*Info+fatory*
Cr2 Ref	*64*	*0 ~ 255*	*Info+fatory*
Cr3 Ref	*74*	*0 ~ 255*	*Info+fatory*
Cr4 Ref	*181*	*0 ~ 255*	*Info+fatory*
Cr5 Ref	*192*	*0 ~ 255*	*Info+fatory*
Cr6 Ref	*118*	*0 ~ 255*	*Info+fatory*
Cr7 Ref	*0*	*0 ~ 255*	*Info+fatory*
SST_Th			Info+fatory

Y0 TH	*20*	*0 ~ 255*	*Info+fatory*
Y1 TH	*20*	*0 ~ 255*	*Info+fatory*
Y2 TH	*20*	*0 ~ 255*	*Info+fatory*
Y3 TH	*20*	*0 ~ 255*	*Info+fatory*
Y4 TH	*20*	*0 ~ 255*	*Info+fatory*
Y5 TH	*20*	*0 ~ 255*	*Info+fatory*
Y6 TH	*20*	*0 ~ 255*	*Info+fatory*
Y7 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb0 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb1 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb2 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb3 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb4 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb5 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb6 TH	*20*	*0 ~ 255*	*Info+fatory*
Cb7 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr0 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr1 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr2 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr3 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr4 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr5 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr6 TH	*20*	*0 ~ 255*	*Info+fatory*
Cr7 TH	*20*	*0 ~ 255*	*Info+fatory*
2nd mips	ON	ON / OFF	Info+fatory
2nd mips count	0	0 ~ 255	Info+fatory
Region	USA	fixed	
PnP Language	ENG_US	ENG_US / SPA_US / FRA_US	Info+fatory
PC Auto Ident	Enable	Auto / Enable	
OTP Lock	…	fixed	
Auto Power	ON	ON / OFF	
Key Sensitivity	27	0 ~ 255	
FANET	OFF	ON / OFF	
S-Micom Upgrade	OFF	ON / OFF	
Hotel Option			
Hotel Mode	OFF	ON / OFF	
SI Vender	Samsung	Samsung / 2M / Locatel / VDA / VDA-SAcentic / Premiere / Sustinere / Quadriga / ETV / Ibahn / Magilink / Otrum / PeninsulaSiemens / OCC / MTI / MstreamsDAWNXTV / Enseo / Cardinal / Guestek / OFF / Movielink / Swisscom	Info+fatory
Power On Channel	3	1 ~ 135	

Channel Type	ATV	ATV / DTV / CATV / CDTV	
Power On Volume	10	0 ~ 100	
Min Volume	0	0 ~ 100	
Max Volume	100	0 ~ 100	
Panel Button Lock	Unlock	Unlock / Lock / OnlyPower	
Power On Source	TV	TV / AV / Comp / PC / HDMI1 / HDMI2 / HDMI3 / HDMI4	
Shop Option			
Shop Mode	OFF	ON / OFF	
Exhibition Mode	OFF	ON / OFF	
Asia Option			**Info+fatory**
TTX	OFF	ON / OFF	Info+fatory
China HD	OFF	ON / OFF	Info+fatory
NT Conversion	OFF	ON / OFF	Info+fatory
Sepco 120Hz	OFF	ON / OFF	Info+fatory
Unbalance	OFF	ON / OFF	Info+fatory
FMTransmitter Support	OFF	ON / OFF	Info+fatory
FMTransmitter Carrier	OFF	ON / OFF	Info+fatory
AF Level adjust	3	0 ~ 7	Info+fatory
TX Power Level	0	0 ~ 3	Info+fatory
Mono Last Memory	OFF	ON / OFF	Info+fatory
Sound			
High Devi	OFF	ON / OFF	
Carrier_Mute	ON	ON / OFF	
Volume Curve	Type2	Type1 / Type2 / error	
Speaker Delay Normal	10	0 ~ 255	
Pilot Level High Thld	0x08h	0x00 ~ 0xff	
Pilot Level Low Thld	0x05h	0x00 ~ 0xff	
FM Prescale	17	0 ~ 255	Info+fatory
AM Prescale	10	0 ~ 255	Info+fatory
NICAM Prescale	33	0 ~ 255	Info+fatory
Amp Volume	0x10h	0x00 ~ 0xff	Info+fatory
Amp Scale	0x78h	0x00 ~ 0xff	Info+fatory
Amp Check Sum	0x0000a820	fixed	Info+fatory
Woofer Type	4	1 ~ 7	Info+fatory
Woofer Scale	0x7Fh	0x00 ~ 0xff	Info+fatory
Woofer Check Sum			Info+fatory
Speaker EQ	ON	ON / OFF	
PEQ Test	0	0 ~ 7	Info+fatory
Amp Model	NTP7300	SAT369B / TAS5715 / NPT7300	Info+fatory
Speaker cut-off Freq	4	0 ~ 16	Info+fatory

SPDIF PCM Gain	-9dB	-10dB ~ 0dB	Info+fatory
BTSC Mono Prescale	0	-10 ~ 10	Info+fatory
BTSC streo Prescale	0	-10 ~ 10	Info+fatory
SAO Prescale	0	-10 ~ 10	Info+fatory
A2 Ident High Thld	0	-10 ~ 10	Info+fatory
A2 Ident Low Thld	0	-10 ~ 10	Info+fatory
Carrier2 Amp High Thld	0	-10 ~ 10	Info+fatory
Carrier2 Amp Low Thld	0	-10 ~ 10	Info+fatory
Carrier2 SNR High THR	0	-10 ~ 10	Info+fatory
Carrier2 SNR Low THR	0	-10 ~ 10	Info+fatory
Config Option			**Info+fatory**
Num of ATV	1	1 ~ 2	Info+fatory
Num of DTV	1	0 ~ 2	Info+fatory
Num of AV	2	0 ~ 3	Info+fatory
Num of SVIDEO	0	1 ~ 3	Info+fatory
Num of Comp	2	1 ~ 3	Info+fatory
Num of HDMI	4	0 ~ 4	Info+fatory
Num of PC	1	0 ~ 1	Info+fatory
Num of SCART	0	0 ~ 2	Info+fatory
Num of DVI	0	0 ~ 1	Info+fatory
Num of OPTICAL Link	0	fixed	Info+fatory
Num of MEDIA	1	0 ~ 1	Info+fatory
Num of PANEL KEY	6	0 ~ 8	Info+fatory
Num of USB Port	2	0 ~ 2	Info+fatory
Num of HeadPhone	0	0 ~ 1	Info+fatory
MFT Offset	62.5	50 / 62.5	Info+fatory
Select LCD / PDP	LCD	LCD / PDP	Info+fatory
HDMI / DVI SEL	1	1 ~ 4	Info+fatory
Indicator Led	OFF	ON / OFF	Info+fatory
Wall Mount	OFF	ON / OFF	Info+fatory
HV Flip	ON	ON / OFF	Info+fatory
Num of Display	2	1 ~ 2	Info+fatory
DVI / HDMI SOUND	Auto	Auto / DVI	Info+fatory
HDMI HOT PLUG	Disable	Enable / Disable	Info+fatory
HOTPLUG SWITCHING	Boot	Disable / Boot / Source	Info+fatory
HOTPLUG DURATION	1200 ms	0 ~ 2000 ms	Info+fatory
CLK TERM DURATION	1200 ms	0 ~ 2000 ms	Info+fatory
HDMI FLT CNT SIG	200 ms	0 ~ 1000 ms	Info+fatory
HDMI FLT CNT LOS	600 ms	0 ~ 1000 ms	Info+fatory
UNSTABLE BAN CNT	3500 ms	0 ~ 100000 ms	Info+fatory
HDMI Err Cnt	5	0 ~ 10	Info+fatory

HDMI ROBIN	ON	ON / OFF	Info+fatory
HDMI Callback	OFF	ON / OFF	Info+fatory
HDMI CTS Thld	8	0 ~ 15	Info+fatory
HDMI CTS Cnt1	1	0 ~ 15	Info+fatory
TMDS_EQ2_Boost	1	0 ~ 7	Info+fatory
TMDS_EQ2_Gain	0	0 ~ 3	Info+fatory
TMDS_PLL_Loop	3	0 ~ 3	Info+fatory
TMDS_CPREG_BLEED	1	0 ~ 1	Info+fatory
HDMI EQ	AUTO	AUTO / Low / Middle / High / Strong	Info+fatory
HDMI Write Type	Combine	Combine / Separate	Info+fatory
HDMI Switch	SIL9287	NONE / SIL9287 / TMDS461	Info+fatory
DVI SET TIME	300 ms	0 ~ 1000 ms	Info+fatory
Type Of PANEL KEY	Horizontal	Horzontal / Vertical / PDPVertical / Nne	Info+fatory
EcoSensor Support	ON	ON / OFF	Info+fatory
LEDMotionPlus Support	OFF	ON / OFF	Info+fatory
Natural Mode Support	ON	ON / OFF	Info+fatory
All Share Support	ON	ON / OFF	Info+fatory
Relax Mode Support	OFF	ON / OFF	Info+fatory
DVI-I Support	…	fixed	Info+fatory
Melfas Function Support	…	fixed	Info+fatory
Light Level Support	…	fixed	Info+fatory
SCC			**Info+fatory**
SCC Mode	Dynamic	Dynamic / Movie	Info+fatory
SCC ON / OFF	OFF	ON / OFF	Info+fatory
SCC Input Data			Info+fatory
Hx	*272*	*0 ~ 512*	*Info+fatory*
Hy	*273*	*0 ~ 512*	*Info+fatory*
Lx	*274*	*0 ~ 512*	*Info+fatory*
Ly	*275*	*0 ~ 512*	*Info+fatory*
sSCC Const			Info+fatory
sSCC Hx	*550*	*0 ~ 1024*	*Info+fatory*
sSCC Hy	*566*	*0 ~ 1024*	*Info+fatory*
sSCC Lx	*598*	*0 ~ 1024*	*Info+fatory*
sSCC Ly	*550*	*0 ~ 1024*	*Info+fatory*
pSCC Const			Info+fatory
pSCC Hx	*550*	*0 ~ 1024*	*Info+fatory*
pSCC Hy	*566*	*0 ~ 1024*	*Info+fatory*
pSCC Lx	*598*	*0 ~ 1024*	*Info+fatory*
pSCC Ly	*550*	*0 ~ 1024*	*Info+fatory*
SCC Source Data	PBA	PBA / PANEL	Info+fatory
SWAP	PBA	PBA / PANEL	Info+fatory

SVC			
Factory Menu Name	***Data***	***Range***	***Remark***
Test Pattern			
Pattern Sel	OFF	OFF / White / Grey / Black / Red / Green / Blue	
Logic Pattern Sel	…	fixed	
Logic Level Sel	…	fixed	
Panel Auto Setting	Success		Info+fatory
Panel Display Time	22Hr		
Logic Usb D / L	Off		Info+fatory
Tuner Status			
DVB			
SNR			
BER			
Singal Strength			
Bandwidth			
Frequency			
LNA Status			
FFT			
Modulation			
Code Rate			
GI			
Hier Modulation			
Frequency Offset			
Timing Offset			
AGC			
UCB			
PLL Type			
DEMOD Type			
TPS LOCK			
RS Lock			
SSI			
SQI			
ISDB-T			
FFT Size_1			
Guard Interval_1			
Freq. Offset_1			
SNR_1			
IF AGC_1			
TMCC Lock_1			
TS Packet_1			

Master Lock_1			
A_Modulation_1			
A_Code Rate_1			
A_Timer InterLeave_1			
A_Segments Num_1			
A_Ber_1			
B_Modulation_!			
B_Code Rate_1			
B_Timer InterLeave_1			
B_Segments Num_1			
B_BER_1			
C_Modulation_1			
C_Code Rate_1			
C_Timer InterLeave_1			
C_Segments Num_1			
C_BER_1			
T-ConUsbDownload	**Failire**		

ADC / WB

Factory Menu Name	***Data***	***Range***	***Remark***
ADC			
AV Calibration	Success	Success / Failure	
Comp Calibration	Success	Success / Failure	
PC Calibration	Success	Success / Failure	
HDMI Calibration	Success	Success / Failure	
ADC Target			
1st_AV_Low	64	0 ~ 1020	
1st_AV_High	880	0 ~ 1020	
1st_AV_Delta	2	0 ~ 7	
1st_COMP_Y_Low	64	0 ~ 1020	
1st_COMP_Cb_Low	…		
1st_COMP_Cr_Low	…		
1st_COMP_Y_High	940	0 ~ 1020	
1st_COMP_Cb_High	…		
1st_COMP_Cr_High	…		
1st_COMP_Delta	2	0 ~ 7	
1st_PC_R_Low	16	0 ~ 1020	
1st_PC_G_Low	…		
1st_PC_B_Low	…		
1st_PC_R_High	1004	0 ~ 1020	
1st_PC_G_Low	…		
1st_PC_B_Low	…		

1st_PC_Delta	2	0 ~ 7	
2nd_AV_R_Low	4	fixed	
2nd_AV_G_Low	4	fixed	
2nd_AV_B_Low	4	fixed	
2nd_AV_R_High	940	fixed	
2nd_AV_G_High	940	fixed	
2nd_AV_B_High	940	fixed	
2nd_AV_Delta	2	0 ~ 7	
2nd_COMP_R_Low	4	fixed	
2nd_COMP_G_Low	4	fixed	
2nd_COMP_B_Low	4	fixed	
2nd_COMP_R_High	940	fixed	
2nd_COMP_G_High	940	fixed	
2nd_COMP_B_High	940	fixed	
2nd_COMP_Delta	2	0 ~ 7	
2nd_PC_R_Low	4	fixed	
2nd_PC_G_Low	4	fixed	
2nd_PC_B_Low	4	fixed	
2nd_PC_R_High	940	fixed	
2nd_PC_G_High	940	fixed	
2nd_PC_B_High	940	fixed	
2nd_PC_Delta	2	0 ~ 7	
2nd_HDMI_R_Low	4	fixed	
2nd_HDMI_G_Low	4	fixed	
2nd_HDMI_B_Low	4	fixed	
2nd_HDMI_R_High	940	fixed	
2nd_HDMI_G_High	940	fixed	
2nd_HDMI_B_High	940	fixed	
2nd_HDMI_Delta	2	0 ~ 7	
ADC Result			
1st_Y_GH	0	fixed	
1st_Y_GL	0	fixed	
1st_Cb_BH	0	fixed	
1st_Cb_BL	0	fixed	
1st_Cr_RH	0	fixed	
1st_Cr_RL	0	fixed	
2nd_R_L	134	0 ~ 255	
2nd_G_L	134	0 ~ 255	
2nd_B_L	134	0 ~ 255	
2nd_R_H	49	0 ~ 255	
2nd_G_H	49	0 ~ 255	

2nd_B_H	49	0 ~ 255	
WB			
Sub Brightness	128	0 ~ 1023	
R_Offset	512	0 ~ 1023	
G_Offset	512	0 ~ 1023	
B_Offset	512	0 ~ 1023	
Sub Contrast	128	0 ~ 1023	
R_Gain	512	0 ~ 1023	
G_Gain	512	0 ~ 1023	
B_Gain	512	0 ~ 1023	
Movie R Offset	…	fixed	
Movie B Offset	…	fixed	
Movie R Gain	…	fixed	
Movie B Gain	…	fixed	

4-4. White Balance - Calibration

4-4-1. White Balance -Calibration

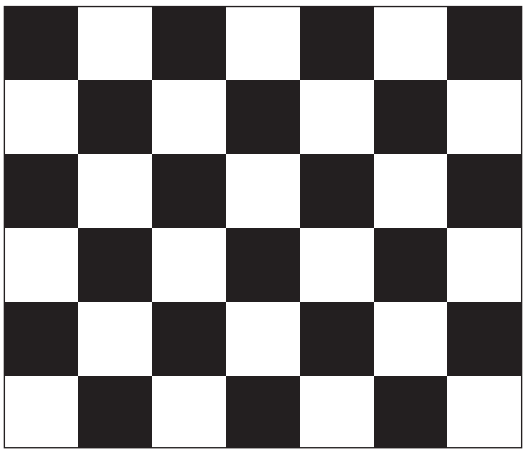
ADC / WB	→	AV Calibration Comp Calibration PC Calibration HDMI Calibration

4-4-2. Service Adjustment

You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

Color Calibration / Adjust spec

1. Source: HDMI
2. Setting Mode: 1280 x 720 @ 60 Hz
3. Pattern: Pattern #24 (Chess Pattern)



(Chess Pattern)

4. Use Equipment: CA210 & Master MSPG925 Generator

Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#3)	Perform in NTSC B & W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B & W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024 x 768) B & W Pattern #24	Lattice
HDMI IN	Perform in 720p B & W Pattern #24	Lattice

■ Method of Color Calibration (AV)

1. Apply the NTSC Lattice (N0. 3) pattern signal to the AV IN 1 port.
2. Press the Source button to switch to “AV 1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “AV Calibration” menu.
6. In “AV Calibration Off” status, press the “ ► ” button to perform Calibration.
7. When Calibration is complete, it returns to the high - level menu.
8. You can see the change of the “AV Calibration” status from Failure to Success.

■ Method of Color Calibration (Component)

1. Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port.
2. Press the Source button to switch to “Component 1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “Comp Calibration” menu.
6. In “Comp Calibration Off” status, press the “ ► ” button to perform Calibration.
7. When Calibration is complete, it returns to the high - level menu.
8. You can see the change of the “Comp Calibration” status from Failure to Success.

■ Method of Color Calibration (PC)

1. Apply the VESA XGA Lattice (N0. 21) pattern signal to the PC IN port.
2. Press the Source button to switch to “PC” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “PC Calibration” menu.
6. In “PC Calibration Off” status, press the “ ► ” button to perform Calibration.
7. When Calibration is complete, it returns to the high - level menu.
8. You can see the change of the “PC Calibration” status from Failure to Success.

■ Method of Color Calibration (HDMI)

1. Apply the 720p Lattice (N0. 6) pattern signal to the HDMI1 / DVI IN port.
2. Press the Source button to switch to “HDMI1” mode.
3. Enter Service mode.
4. Select the “ADC” menu.
5. Select the “HDMI Calibration” menu.
6. In “HDMI Calibration Off” status, press the “ ►” button to perform Calibration.
7. When Calibration is complete, it returns to the high - level menu.
8. You can see the change of the “HDMI Calibration” status from Failure to Success.

4-4-3. White Balance - Adjustment

		(Low light)	(High light)
ADC / WB - White Balance	→	Sub Bright R offset G offset B offset	Sub Contrast R gain G gain B gain

■ LN26D450G1G / LN26D450G1M

P - Mode	Adjustment Coordinate CA - 210				
		x	y	Y (Luminance)	T (K) + MPCD
[Dynamic Cool1] HDMI Comp CVBS	H / L	272	278	49 fL (Sub_CT: 128 Fix)	12,000 (+ / -0)
	L / L	272	278	3.6 f L (Sub_Brt: 128 Fix)	12,000 (+ / -0)
[Movie Warm2] HDMI Comp CVBS	H / L	313	329	20.8 fL (M_Sub_CT: 128 Fix)	6,500 (+ -0)
	L / L	329	329	1.4 fL (M_Sub_Brt: 128 Fix)	6,500 (+ -0)

■ LN32D450G1G / LN32D450G1M

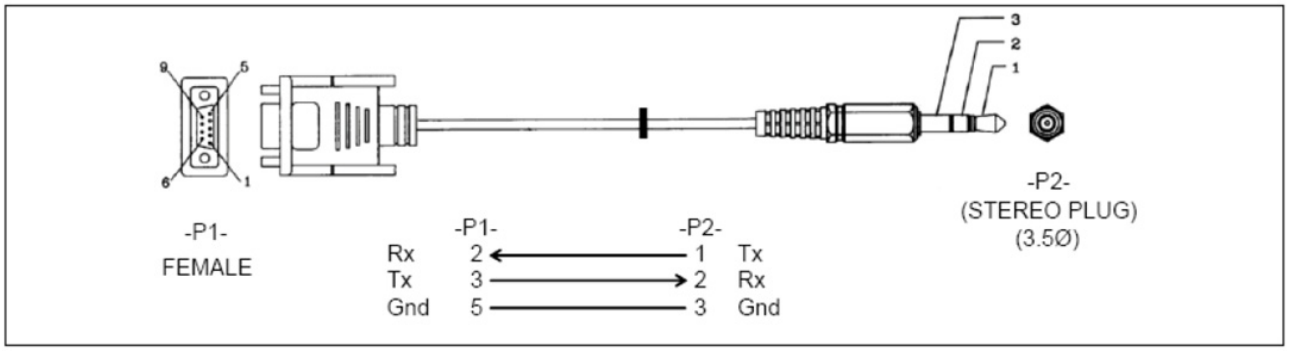
P - Mode	Adjustment Coordinate CA - 210				
		x	y	Y (Luminance)	T (K) + MPCD
[Dynamic Cool1] HDMI Comp CVBS	H / L	272	278	59 fL (Sub_CT: 128 Fix)	12,000 (+ / -0)
	L / L	272	278	3.7 fL (Sub_Brt: 128 Fix)	12,000 (+ / -0)
[Movie Warm2] HDMI Comp CVBS	H / L	313	329	20.8 fL (M_Sub_CT: 128 Fix)	6,500 (+ -0)
	L / L	329	329	1.4 fL (M_Sub_Brt: 128 Fix)	6,500 (+ -0)

4-5. Servicing Information

1. To RS232C control
   Port: COM# (Serial)
   Bit rate: 38400
   Data Bit: 8 bit
   Parity: None
   Stop Bits: 1
   Flow Control: None

2. Description of RS232C

Pin#	Name	Full Name
1	CD	Carrier Detect
2	RxD	Received Data
3	TxD	Transmitted Data
4	DTR	Data Terminal Ready
5	GND	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicator



4-6. Software Upgrade

Software Upgrade can be performed by downloading the latest firmware from samsung.com to a USB memory device.

Current Version - the software already installed in the TV.

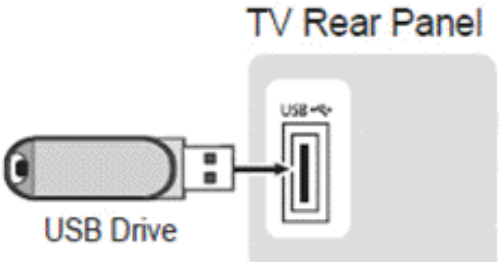
※ **Note** Software is represented as 'Year / Month / Day_Version'.

4-6-1. By USB

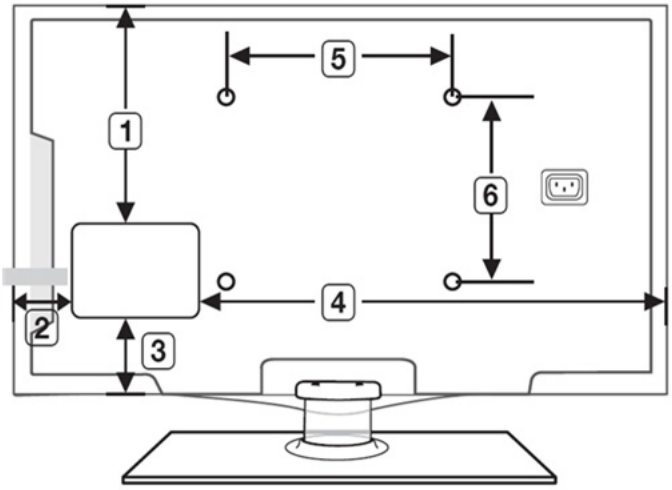
Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the TV. Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied.

The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version).

When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.



4-7. Rear Cover Dimension

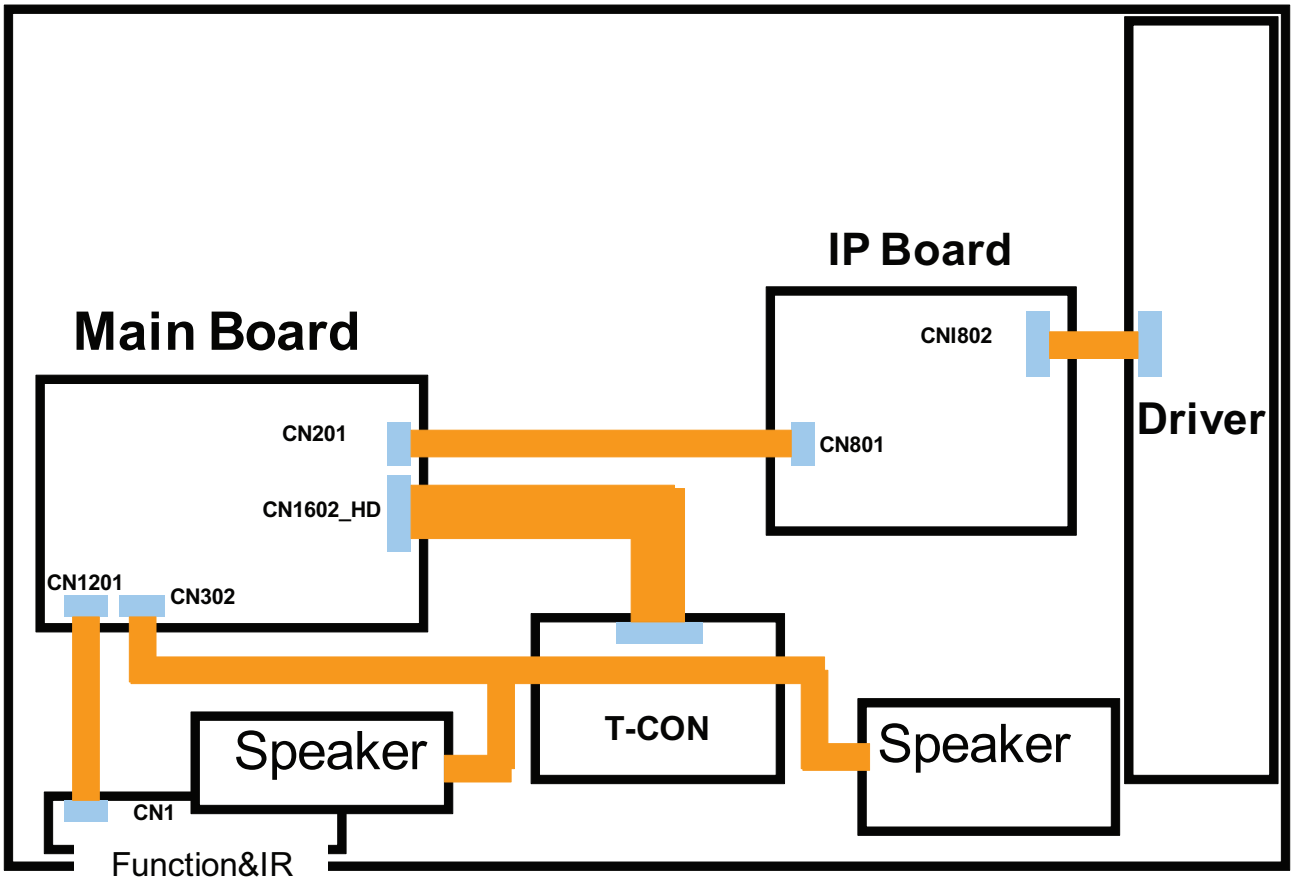


Model	1	2	3	4	5	6
LN26D450G1G **LN26D450G1M**	203.3 (mm)	61.4 (mm)	110.2 (mm)	431.4 (mm)	200 (mm)	100 (mm)
LN32D450G1G **LN32D450G1M**	259.5 (mm)	66.8 (mm)	129.4 (mm)	560.8 (mm)	200 (mm)	200 (mm)

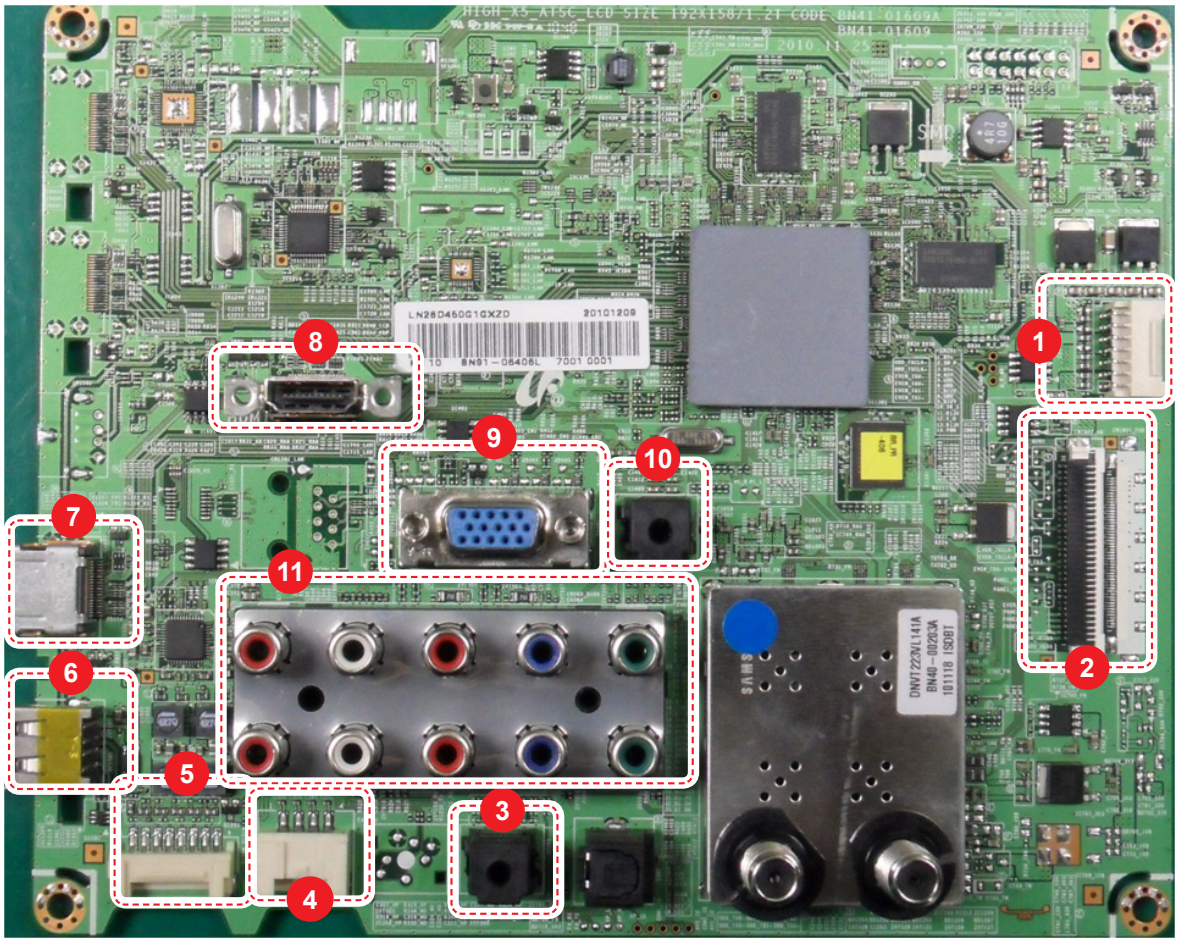
5. Wiring Diagram

5-1. Wiring Diagram

■ HD Model



5-2. Connector



1 CN201 (To Powr board)			
1	B5 V	8	GND
2	SW_POWER	9	B12VS
3	B5 V	10	SW_INVERTER
4	A5 V	11	B13 V
5	GND	12	NC
6	GND	13	B13 V
7	B12VS	14	PWM_DIMM

2 CN1602_HD (To Panel)			
1	Panel_VCC	16	ODD [CLK]+
2	Panel_VCC	17	ODD [CLK]-
3	Panel_VCC	18	GND
4	Panel_VCC	19	ODD [2]+
5	Panel_VCC	20	ODD [2]-
6	GND	21	GND
7	GND	22	ODD [1]+
8	GND	23	ODD [1]-
9	TCON_WP	24	GND
10	FORMAT	25	ODD [0]+
11	NC	26	ODD [0]-
12	GND	27	GND
13	ODD [3]+	28	SDA_TCON
14	ODD [3]-	29	SCL_TCON
15	GND	30	NC

3 CN301 (MONITOR OUT)			
1	GND	5	NC
2	OUT_R	6	GND
3	OUT_R	7	NC
4	GND		

4 CN302 (SPEAKER)			
1	R+	3	L+
2	R-	4	L-

5 CN1201 (FUNCTION)			
1	IR	5	MSDA
2	GND	6	FUNC_INTR
3	A3.3 V	7	LED_STB
4	MSCL	8	NC

6 CN1501 (USB1)			
1	USB_VCC	3	USB_DP
2	USB_DM	4	GND

7 CN601 (HDMI2)			
1	HDMI2_RX2+	11	GND
2	GND	12	HDMI2_RXCLK-
3	HDMI2_RX2-	13	HDMI_CEC
4	HDMI2_RX1+	14	GND
5	GND	15	SCL
6	HDMI2_RX1-	16	SDA
7	HDMI2_RX0+	17	GND
8	GND	18	5 V
9	HDMI2_RX0-	19	HPD
10	HDMI2_RXCLK+		

8 CN602 (HDMI1)			
1	HDMI1_RX2+	11	GND
2	GND	12	HDMI1_RXCLK-
3	HDMI1_RX2-	13	HDMI_CEC
4	HDMI1_RX1+	14	GND
5	GND	15	SCL
6	HDMI1_RX1-	16	SDA
7	HDMI1_RX0+	17	GND
8	GND	18	5 V
9	HDMI1_RX0-	19	HPD
10	HDMI1_RXCLK+		

9 CN401 (PC)			
1	PC_RED	9	PC_5 V
2	PC_GREEN	10	IDENT_PC
3	PC_BLUE	11	R_FANET
4	T_FANET	12	SDA_DOWN
5	GND	13	PC_HS
6	GND	14	PC_VS
7	GND	15	SCL_DOWN
8	GND		

10 CN402 (PC / DIV SOUND)			
1	GND	4	NC
2	PC_SR_IN	5	NC
3	PC_SL_IN	6	NC

11 CN504 (UNIVERSAL JACK)			
1	GND	16	GND
2	COM2_SL	17	COMP1_SL
3	COM2_SR	18	COMP1_SR
4	GND	19	GND
5	COMP2_SR	20	COMP1_SR
6	COMP2_SL	21	COMP1_SL
7	GND	22	GND
8	COMP2_PR	23	COMP1_PR
9	COMP2_PR	24	COMP1_PR
10	GND	25	GND
11	COMP2_PB	26	IDENT_COMP1
12	COMP2_PB	27	COMP1_PB
13	GND	28	GND
14	IDENT_COMP2	29	IDENT_AV
15	COMP2_Y	30	COMP1_Y

5-3. Connector Functions

Connector	Functions
CN201 ↔ IP CN801	Supply main power and dimming signal from IP board to Main Board.
CN1601_FHD / CN1602_HD ↔ T-Con CNF1	The LVDS signal transfered from Main Board to Panel.
CNI802 ↔ T-BALANCE Board	Supply power from IP board to Driver Board.

5-4. Cables

Use	LEAD (Main-IP 14P)	LVDS (Main - TCon)	LEAD (IP-Driver Board 7P)
Code	26": BN39-01449E 32": BN39-01449A	26": BN96-13227L 32": BN96-13227A	26": BN39-01448A 32": BN39-01448A
Photo